NOVEMBER • 1961

FIREMEN

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Falling Wall of Warehouse — *see page 40*

IONAL FIRE
TECTION
OCIATION

66th
year

Take A Careful Look At Parade Floats - - page 10

Shall We Run? Hide? Or Be Practical? - page 14

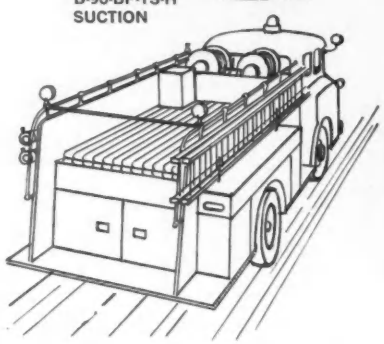
V 28 11
NOV

SPECIFY ELKHART'S NEW BALL VALVES on your next apparatus

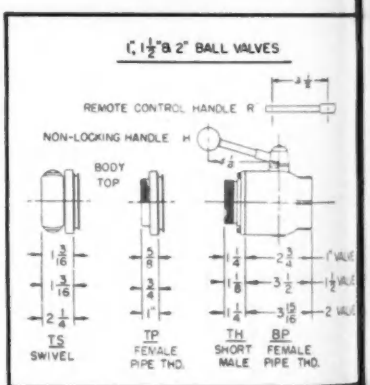
Completely new from inlet to outlet

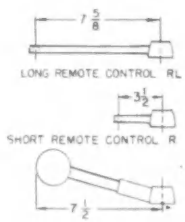
- Meet all requirements for suction, discharge, inline, remote control, high pressure or low pressure valves in 1", 1½", 2" and 2½" sizes.
- Locking handle, ball type handle, remote control handle adjust quickly to any one of eight different handle positions.
- 2½" valves have largest available waterway of any standard apparatus valve.
- 1", 1½", 2" valves have full waterway throughout. (Full waterway through ball.)
- All 2½" valves have an exclusive, patented, adjustable ball seat. The only apparatus valve that can be adjusted without removing a single nut or bolt. Apparatus is never out of service.
- All 1", 1½" and 2" valves have an exclusive adjustable seat. Adjustment can be made without removing piping from apparatus.
- New design saves weight and space —valves are shorter and lighter. Check chart dimensions.
- Locking type, swivel joint, remote control operating unit available for all valves.
- New twist type locking handle locks valve securely in any position.

Refer to chart for your choice of inlets and outlets.



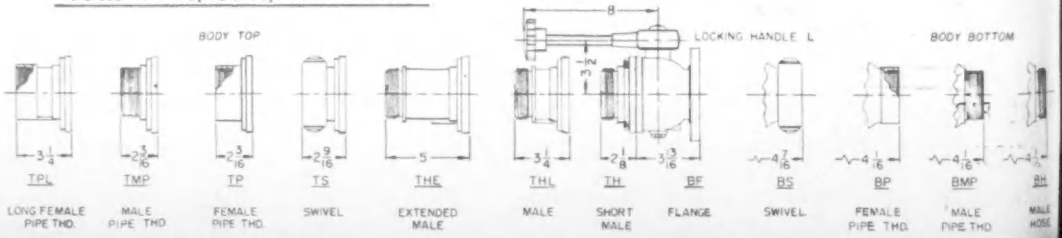
Now your apparatus can be 100% equipped with Elkhart Ball Valves. Completely new . . . completely re-designed. Development of these new valves came from experience gained through close contact with the Fire Service. *We urge you to write for complete specification folder.*





ELKHART BRASS MFG. CO., INC.
ELKHART, INDIANA

NOTE: BODY TOPS TPL, THE & THL, HAVE 3/4 DRAIN PLUGS



Barton-American ENGINE VACUUM PRIMER

. . . another superior feature you get in American FIRE TRUCKS

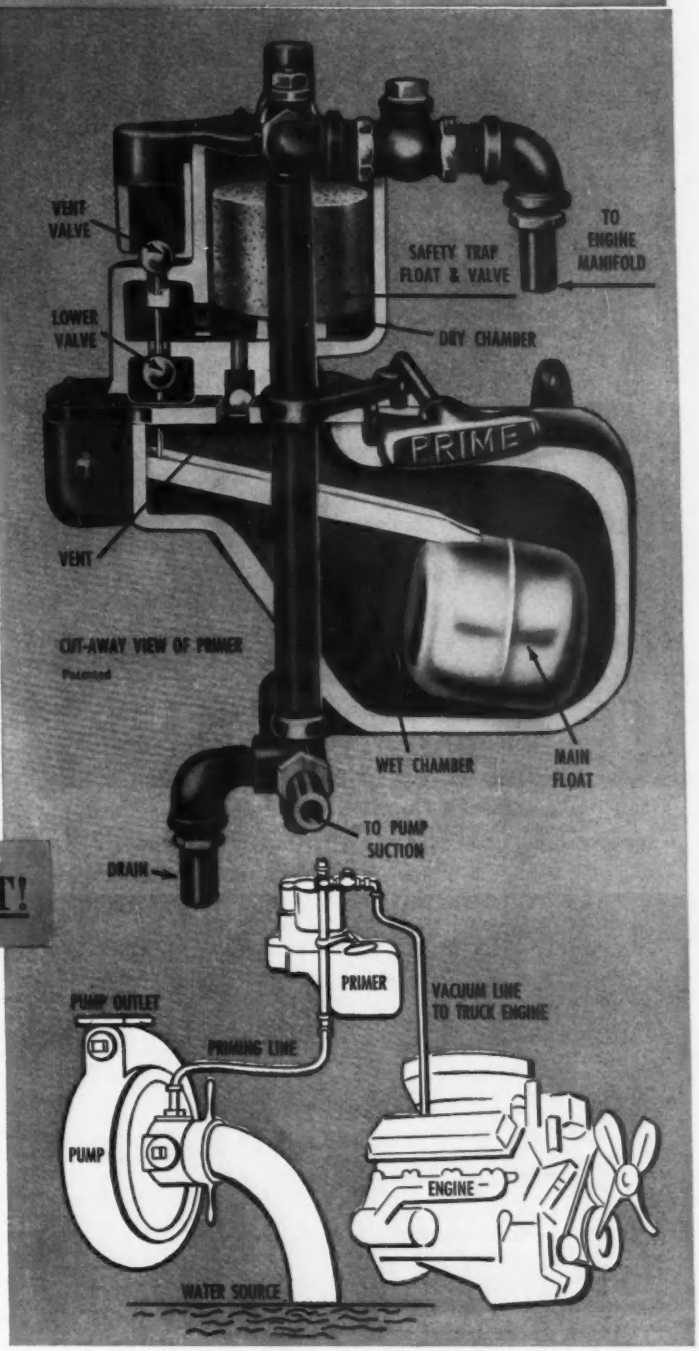
Always operates with like-new efficiency — not affected by engine wear

Employs a simple, trouble-proof principle

Requires no oil, no adjusting, no maintenance

Completely frost-proof

Always dependable



This PRIMER IS FAST!

The Barton-American has *none* of the many disadvantages of rotary priming pumps. Superior to exhaust primers, which require engine speeds as high as 3300 RPM, *the Barton-American readily primes at 1000 RPM.* If the truck engine will run, the Barton-American will prime. Patented dual float design makes it impossible for water to pass into the truck engine, eliminating possibility of engine damage.

For more details on this and other superior features you get in American Fire Apparatus — even though you don't specify them — see your nearest American representative.

American

AMERICAN FIRE APPARATUS CO.

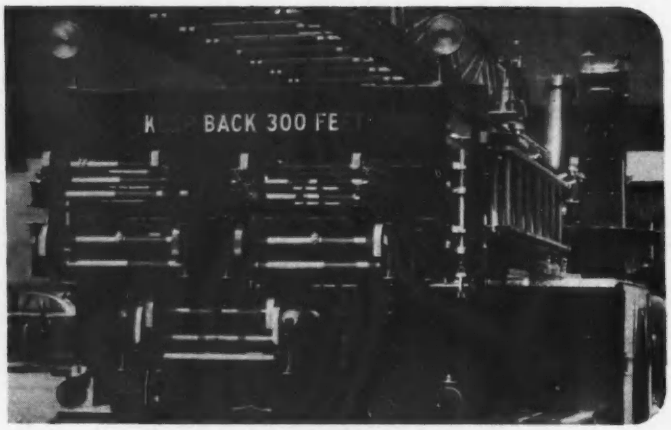
FIRE APPARATUS CO.

"Always Pioneering with Better Engineering"

Main Office: Main Street Rd., Battle Creek, Mich. Plants at: BATTLE CREEK, MICH., MARSHALLTOWN, IA., STRATFORD, ONT.

An Alco-Lite 14′ Pumper Roof Ladder and 24′ Pumper Extension Ladder on a 900 Series American LaFrance Pumper.

An Alco-Lite 14′ Pumper Roof Ladder and 35′ Pumper Extension Ladder on a 900 Series American LaFrance Pumper.



This typical nesting of Alco-Lite Ladders on American LaFrance Aerials includes a 24′ Pumper Extension Ladder, 20′ Straight Ladder; 35′ Heavy Duty Extension Ladder, 28′ Pumper Extension Ladder; 16′ Pumper Roof Ladder, 35′ Heavy Duty Extension Ladder, and 50′ Heavy Duty 3 Section Extension Ladder.

Original Manufacturer of Aluminum Ladders

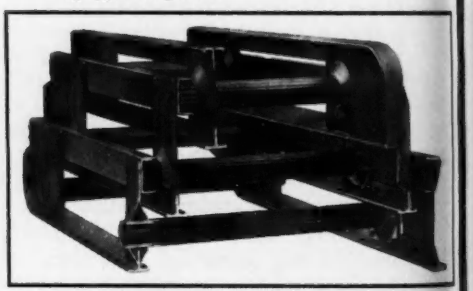
ALCO-LITE

aluminum ladders are standard equipment on these trucks

Alco-Lite Aluminum Ground Ladders are lighter weight . . . easier-to-handle . . . safe. Exclusive gusset plate, expansion bushing construction makes possible the open side rail,T-channel design. Excess weight adding bulk in the side rails is eliminated. More than meet all current tests for strength and safety.

Alco-Lite Aluminum Ladders are unaffected by moisture, water, fumes, gases. Won't warp, rust, rot, splinter, or burn. Almost maintenance free!

Rungs won't twist, turn, or break off. Feature non-slip type corrugations.



Channel slides prevent sections from disengaging. On large ladders, automatic spring loaded locks allow sections to extend, lock, and unlock simultaneously.

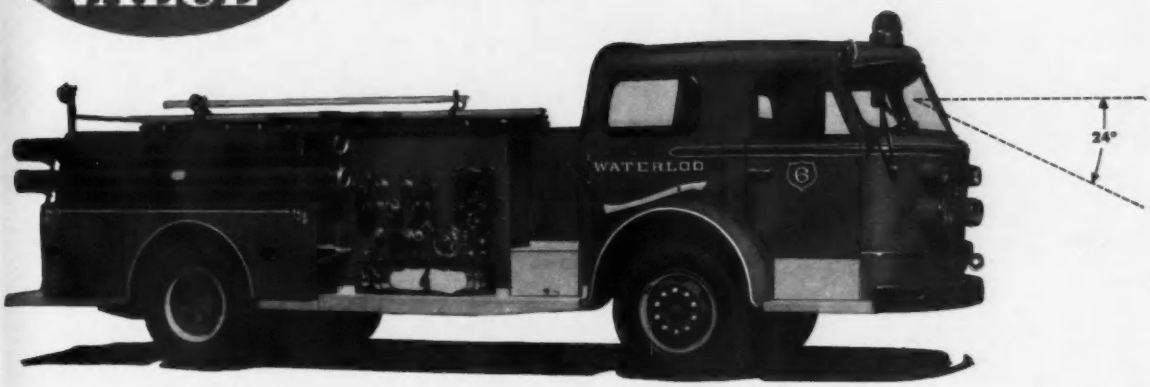
Aluminum Ladder Company

FLORENCE S. CAROLINA

ALCO-LITE

AMERICAN LAFRANCE
EXTRA VALUE

250% MORE VISION



FOR CAB-AHEAD-OF-ENGINE MODELS WHEN COMPARED WITH OLD-STYLE MODELS . . .

IN SAFETY SURVEYS the Fire Service asked for more visibility for the driver. In 1947 American LaFrance introduced the cab-ahead-of-engine design to provide this safety. In the ensuing years, the safety record has been impressive, with the new 900 Series American LaFrance providing even better vision and safety.

MORE VISION for safer driving in heavy traffic and at street intersections.

MORE VISION for accurately spotting the pumper at a hydrant.

MORE VISION for getting through narrow streets and alleyways.

MORE SAFETY for the men riding the apparatus as accident records show. Less maintenance of the equipment, too!

Specify AMERICAN LAFRANCE for more safety in the operation of your equipment.

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A DIVISION OF STERLING PRECISION CORPORATION
ELMIRA, N.Y.

LaFrance Export Corporation
Elmira, N. Y.

LaFrance Fire Engine and Foamite, Ltd.
Toronto 18, Ontario, Canada

These Mack Model B-95 1000 GPM triple combination pumpers represent newest acquisitions in Skokie's continuing program of modernization which assures that fire protection will always be equal to the demands of a growing community.

SKOKIE keeps pace by adding Macks

Providing fire fighting facilities to keep pace with a rapidly expanding population is an all-too-familiar problem in towns and cities across the nation. In alert, civic-minded Skokie, Ill., which prides itself on efficient performance of public service, an up-to-the-minute fire department is rightfully a source of community satisfaction.

Reasons for the excellence of Skokie's fire department are not hard to find. An efficient, well-trained professional force of nearly 70 men under the guidance of Chief R. H. Redick . . . a new fire station, so attractive and well designed that it may become a model of its type . . . and a growing list of additions of equipment and apparatus—headed by two new Mack pumpers.

Check leading fire departments anywhere and you'll find Mack apparatus usually rated first. *Custom engineering* is one reason. Mack can deliver the unit that exactly fits your needs; built with Balanced Design—the exclusive Mack practice in which every major component is engineered, manufactured and tested by Mack to work most efficiently with every other component as an integrated unit. *Dependable performance* is the second—and allied—reason. Mack fire apparatus is made to the highest standards in the industry. For sheer dependability, nothing can touch it. For sustained performance, nothing can match it. You can *always* depend on a Mack.

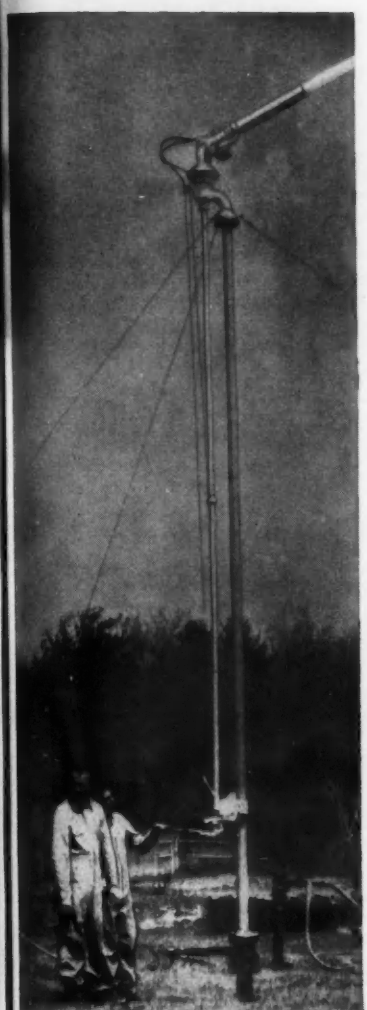
Your nearest Mack branch or distributor will gladly give you full details on the complete line of Mack quality fire apparatus. Mack Fire Apparatus, Allentown, Pennsylvania. Mack Trucks of Canada, Ltd., Toronto, Ontario.

MACK
FIRST NAME FOR
FIRE APPARATUS

COMPLETE LINE OF PUMPERS . . . 500 TO 1250 GPM . . . SQUAD AND HOSE WAGONS . . . AERIALS 65' TO 146' . . . COMBINATION LADDER TRUCKS

Fight fires from any angle...
WITH ROCKWOOD SPECIALTY TURRET NOZZLES

Getting The Upper Hand...



Rockwood Extended Manual Control Turrets can be located 10 to 20 feet above a remote control station on the ground. Greater discharge range increases their fire fighting coverage. Higher elevations are engineered for special applications.

On the ground, on trucks, or towering over the flames, Rockwood Turret Nozzles are valuable fire fighting aids for use in refineries and chemical plants.

In fact, Rockwood makes the most complete line of specialty turret nozzles on the market. Every type is designed to fight fire four ways: with solid FOAM stream, FogFOAM, WaterFOG or solid water stream. And all are easily adjustable to meet changing fire conditions.

Throughout the country these Rockwood advancements are proving they can hit fires harder and faster. Find out how well they can protect your own plant. For an illustrated booklet on this complete line, write to Rockwood Sprinkler Company, Portable Fire Protection Department, 425 Harlow St., Worcester 5, Mass.

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A Division of The Gamewell Company
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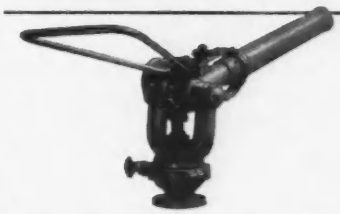
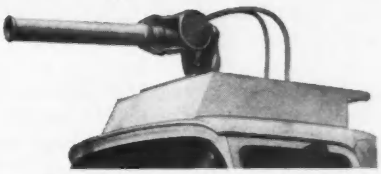
Engineers Water
...to cut fire losses

Distributors in all principal cities

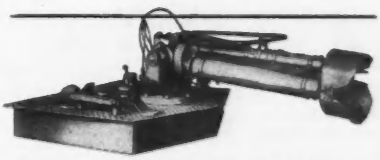
Fighting Fires Four Ways



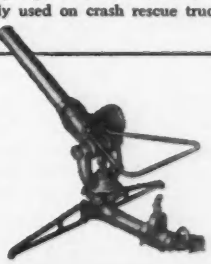
Rockwood Direct Manual Control Turrets give fire fighters "on deck" control from their cab roofs.



A Remote Manual Control Turret is easily handled by a man in the driver's seat. Ideal for fast action.



The Remote Hydraulic Control Type, single or dual model, is power controlled from within the cab. Widely used on crash rescue trucks.

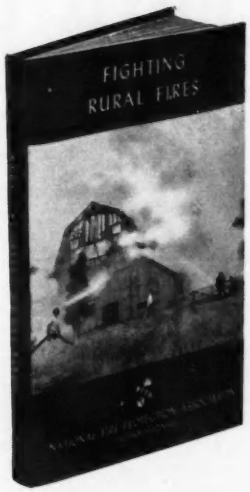


The Portable Type goes off the truck and into action in seconds – wherever hose lines can be brought into action.

ANNOUNCING . . .

"FIGHTING RURAL FIRES"

This book was written especially for the interest and guidance of small fire departments in rural areas. Prepared by the Subcommittee on Fire Departments of the NFPA Committee on Rural Fire Protection, it presents a large variety of information on fire fighting operations, equipment and fire prevention.



129 pages, illustrated
5¾ by 8¾ inches, clothbound

Fighting Rural Fires will be particularly useful to the small or newly formed fire department. The text was prepared by a committee of volunteer fire chiefs, and fire protection and fire training authorities who have worked with fire departments in rural areas for many years.

As shown in the Table of Contents at right, the book covers many aspects of the fire problem as well as the fire department operations which are essential for efficient response to alarms and fire control. Special attention is given to the placement of apparatus, the use of hand lines, interior fire fighting, rescue and overhauling, and making the best use of water supply in the rural area.

Of particular help to the modern volunteer fire department will be the chapter on inspections, which gives considerable attention to pre-fire planning of major target hazards. The selection, purchase and use of fire apparatus and equipment is also covered extensively in this book.

Because there are so many aspects to the rural fire problem, *Fighting Rural Fires* contains a reference list of the sources of detailed information on pertinent subjects, including those which are important to firemen's training.

If your fire department operates in a rural area, *Fighting Rural Fires* should be available for study by each fire fighter. You can order a copy today with the convenient order blank below.

$3.50 per copy

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III	Responding to Alarms
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IX	Using Apparatus at Rural Fires
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National Fire Protection Association
60 Batterymarch Street, Boston 10, Massachusetts

Gentlemen: Please send me.....copies of the new manual "Fighting Rural Fires" at $3.50 per copy.

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FIREMEN

Volume 28 Number 11

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

FIREMEN magazine is available only through membership in the NFPA. Complete details on membership can be obtained by writing to the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

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Just about everyone in the fire service is familiar with the terrible consequences of panic. This blind, unreasoning behavior of people in moments of crisis has led to needless injury and loss of life in many fires and non-fire incidents of the past century. For example, here are some items selected from the files of the NFPA Fire Record Department concerning panic in motion picture theatres where *little or no fire occurred*, or else there was only a *false alarm of fire.*

Tampico, Mexico, 1955 — 13 killed; Salvatierra, Mexico, 1952 — 13 killed; Sao Paulo, Brazil, 1938 — 31 killed; Paisley, Scotland, 1929 — 69 killed.

Readers probably can think of many other incidents in which panic was a factor, such as an ordinary dwelling fire, a factory blaze, or perhaps a more publicized incident like the Coconut Grove fire in Boston, the oyster roast tragedy in Arundel Park, Maryland, or other large loss of life fires.

Yes, the fire service is well acquainted with the tragedy of panic. In fact, a vitally important quality of the good fire officer or fire fighter is his ability to maintain composure and to accomplish the job of rescue and fire control in moments when untrained persons in the vicinity are acting blindly and perhaps dangerously. At such times, the fire fighter must overcome his own inclinations for self-preservation and perform the tasks for which he has been trained. He has some comfort in knowing that he is part of an efficient team which has steeled itself for complex operations in the face of disaster.

Right now, the fire service should be able to see evidence of panic on a tremendous scale. In reaction to the Berlin crisis and other international events, confusing and irrational statements have been made in United States newspapers and on radio and television programs. It is suggested that everyone should go underground for two weeks. It is suggested that we evacuate all of the people in big cities on the one hand and that we are safer to stay where we are on the other hand. We hear debates on the relative worthiness of bombproof shelters versus shelters designed to protect against radioactive fallout. More insidious, though, is the speculation of how the American people will behave if the United States is ever bombed. Many of the "authorities" seem convinced that we will all go crazy and try to crawl into each other's shelters in search of food or safety. A wire service story asked "Will you be able to keep your neighbor out of your shelter? Will you be able to turn away small children who come to you for food and safety?" We heard of one speaker who advised members of a PTA group to purchase guns to defend themselves against such "shelter marauders." A group in California is already practicing with guns for such an emergency.

Our free society permits everyone to advance his own theories and opinions, and, unfortunately, in times of crisis we are apt to be exposed to hysterical statements. It is surprising that little attention is being paid to the stronger qualities of the American people which have been forged in three hundred years of tensions, strife and dissidence. Some of these "authorities" do not seem to realize that there are organizations like the fire service, the police and the military which deal with crises every day and that individuals within these organizations are not allowed the luxury of panic or terror when a job must be done.

Our President and other political leaders have indicated very strongly that the world will be in a state of dangerous tension for many, many years in the future, perhaps for generations. There is a possibility that some cities or areas of the United States or Canada may be subjected to attack by atomic weapons. If so, there will be devastation, panic, and certainly some major fires to be fought. And members of the fire service will be called upon to control those fires, even though their own lives or the lives of their families may be severely threatened. But if the fire fighter does his job competently in the face of wartime disaster and shows the calm skill which he has developed in everyday combat of fire, it is quite likely that untrained persons will imitate his conduct.

In our present critical moments, the fire service must show the same calmness in evaluating potential disaster and preparing for it. The hysterical prophecies of "what might possibly happen" with which we are being deluged closely parallel the unthinking responses of those persons who died in the motion picture theatres, when there was no reason for dying. We have some tough jobs to do in the years of perseverance towards the goal of liberty. Let's not waste time and energy in panic and flight.

WARREN Y. KIMBALL, Managing Editor; PAUL R. LYONS, Editor; HENRY S. GERE, Advertising Manager; ROWENA D. DORES, Editorial Assistant; SHIRLEY TOBEY, Fire Service Department; VIRGINIA STILES, Advertising Department.

TAKE A CAREFUL LOOK AT

PARADE FLOATS!

Spokane, Washington, Fire Department stresses fire safety in parades.

Last minute installation of an exhaust pipe extension so that it would clear decorations and minimize accumulation of carbon monoxide gas was ordered on this float by the Spokane safety inspection team shown here.

Free spraying of floats with fire-retardant chemical is offered participants by the Spokane Lilac Festival Association. Some units required a number of applications.

Inspectors are putting a match to artificial flowers after the float had been sprayed with fire-retardant chemicals.

In the coming months, millions of people will be watching parades of all types and sizes during Thanksgiving, Christmas, New Year's and Mardi Gras celebrations. These are occasions when fire departments must be particularly diligent about safety for individuals and the general public. As an example of what can be accomplished, Chief Bill Dunham's Fire Department outlines some practical steps in the following article.

IN THE Spring of each year, Spokane, Washington plays host to a week-long Lilac Festival, which ends with two huge parades. The first is the Lilac Torchlight Parade; the second is the Grand Lilac Festival Armed Forces Parade. Both events occur in a three-day period about the third week in May. They attract an audience of hundreds of thousands as well as bands, floats, marching units and exhibits from the three northwestern states and British Columbia.

The safety program for Spokane's parades, carefully planned and executed, has been in operation for ten years, and each year it is strengthened and improved. It is a cooperative project of Spokane's Fire Department headed by Chief William A. Dunham and the Chamber of Commerce's active Fire and Accident Prevention Bureau, in cooperation with the Lilac Festival Association.

The Lilac Festival features among its many events a junior parade of costumed marchers and decorated bicycles on the opening day, a "Torchlight" procession on a midweek evening and the giant daytime combination Lilac Festival and Armed Forces parade that climaxes the festivities.

The work of the inspection teams starts when the festival is in the planning stage. Float requirements and general float safety regulations are sent to communities with the invitations to participate in the parades. Any queries then received by the Lilac Festival Association relating to those specifications or use of certain float building materials are referred to the Chamber of Commerce Fire and Accident Prevention Committee and the Fire Department.

Because few natural flowers are available in May, other materials are used to decorate the floats. The inspection teams and parade sponsors discourage use of some materials and prohibit highly flammable ones. They encourage float builders to use fire-retardant or noncombustible materials. Rejected are paper napkins, cotton batting, foam plastics and rubber.

General safety requirements are:

Smoking prohibited on or near floats, including the assembly area and along the line of march.

Use of flameproof material or spraying with flame-proofing liquid required.

An approved fire extinguisher must be carried on every float and at least one person on the float must be familiar with its correct use.

Exhaust pipes must extend beyond the decorations and be covered with pipe lagging or wrapped with asbestos tape.

Float drivers must have proper visibility. Driver cubicles must be properly ventilated and the vehicle on which the float is mounted must have good operating brakes.

Trucks or jeeps on which floats are built must be properly serviced for gasoline, water, oil, tires checked and battery in good condition before parade time. No auxiliary gasoline may be carried.

A tow ring or cable must be readily accessible from outside the float so that the vehicle may be pulled out of the procession with the least possible delay in case of breakdown.

Last May floats were inspected in the assembly area before each parade. Accompanying the inspectors was a professional spraying service crew with a mobile tank truck and spray hoses. Every one of the 67 floats were given one or two applications of flame-proofing liquid, while fire department members made flame tests of various materials used on each of the floats.

Inspection teams included a fire inspector, city gas inspector, electrical inspector and a general inspector from the fire and accident prevention bureau. Each team was armed with an inspection sheet, a special instruction sheet for the float driver and a map of the assembly area showing the location of each float.

After checking the float material for fire resistance and the specially required wiring, the teams concentrated on the dangers of carbon monoxide gas accumulation in the driver cubicles. Each driver was required to start his engine and after a reasonable time, usually 5 minutes, the inspectors made a "snifter" test to detect any carbon monoxide accumulation. The driver then was given a capsule which changes color in presence of carbon monoxide to place in his cab. He was instructed to break the capsule as his unit joined in the line of march. If carbon monoxide was indicated, he was to pull over to the curb, leave the cab and seek aid of tow apparatus for the remainder of the parade route. Only one vehicle in both parades was pulled from the procession for that reason.

The inspectors checked on escape hatches to make sure drivers could get out quickly in case of fire or other danger. They inspected gas tanks to make sure that fuel supplies were adequate to get the vehicles through the entire parade route and back to the disbanding area. Special attention was given to exhaust systems and pipes, the condition of brakes and driving vision. They also checked out fire extinguishers on each rig and made sure each vehicle had a tow cable or ring. According to Lieut. William J. Hingston, head of the fire department's inspection division, the float drivers and managers were most cooperative.

Every float that proved "okay" was tagged with a green label initialed by men who inspected for electrical, fire, gas, and general safety and was signed by the inspection team chairman. Any float that failed to pass the tests was issued a red tag on which were listed corrective measures to be taken. When the work was accomplished to the satisfaction of the inspectors, the red tags were replaced with green ones. The inspections both days lasted about two and one-half hours.

According to Jack Paradise, chairman of the Fire and Accident Committee, the inspectors found only three poorly ventilated float cabs, but corrective measures were taken.

This year, parade day was an abnormally hot one and several young marchers were almost overcome from heat exhaustion. The inspectors have proposed to the festival committee that all marchers be equipped with salt tablets and that emergency first-aid stations be set up along the parade route to administer to those who might become exhausted.

They also have proposed modification of float construction rules, including a provision that all exhaust pipes lead to the rear of the floats. In the past, some have issued from the sides and others, because the trucks on which they are mounted operate in reverse, actually had their exhaust in the front of the floats, creating both fire and carbon monoxide hazards.

Chief Dunham welcomes any inquiries about the parade inspection program and will supply copies of their materials.

Fire and gas safety inspectors check escape hatch of float entered in the 1961 Lilac Festival parades as a part of Spokane's parade safety program.

The city gas inspector is shown giving the float driver a detection capsule that will turn color if carbon monoxide accumulates along the parade route.

"Green tagged," these floats are ready to roll in Spokane's Lilac Festival parade after being approved by specially trained inspection teams.

Fire department facilities of the Port of Baltimore include these four powerful fireboats, three of them identical in design.

Baltimore's Fleet of Fireboats

IN RECENT years the facilities of the Port of Baltimore, Maryland, have been expanded and modernized continually. Ship channel improvements and other changes are under way to speed operations and service for water-front properties. Major facilities in the harbor include four railroad marine terminals, 270 piers, wharves and docks, three grain elevators, nineteen ore cranes, thirty general merchandise warehouses, four cold storage plants, and eleven ship repair yards. It has been estimated that the facilities and current improvements represent a capital investment of approximately 400 million dollars.

The Baltimore Fire Department, under the command of Chief John Killen, has the responsibility of protecting this modern port against fire. Accordingly, as part of the department's current capital improvement program, three new fireboats, costing more than a million dollars altogether, recently were put in service. They replaced three older vessels which were retired.

The new shallow draft boats join the half-million dollar five-year-old *Mayor Thomas D'Alesandro, Jr.*, which was described in the December, 1956 issue of FIREMEN magazine. They bring marine fire fighting capacity up to the equivalent of more than 30 land-based pumpers.

The *Mayor Thomas D'Alesandro, Jr.*, was launched in 1956.

Designed by Philadelphia naval architect Thomas D. Bowes they are identical in layout and construction. Built by Jakobson Shipyard, Inc., at Oyster Bay, Long Island, N. Y., they are named in honor of Baltimore's present Mayor J. Harold Grady; P. W. Wilkinson, retired executive secretary of the fire department, and retired department chief August Emrich, who served for nearly 50 years until 1932.

The diesel-powered boats replace the *Cascade*, a converted World War I Navy subchaser; the *Cataract*, a steam-powered fireboat with 69 years' service, and the steam-powered *Deluge* with 49 years afloat.

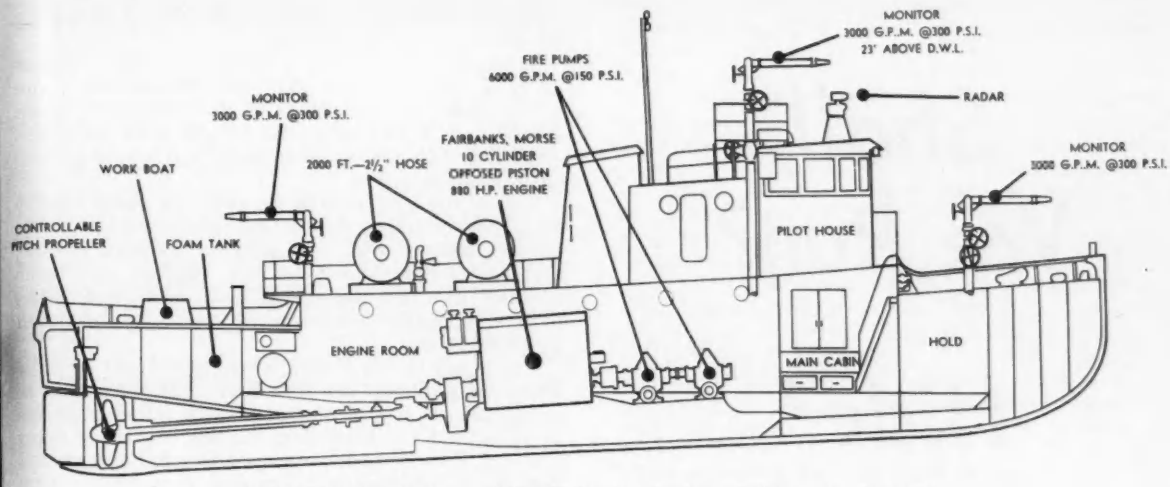
Each is equipped with two-way radio and radar. Manned by crews of eight, the boats have steel hulls 85 feet long, beams of 19 feet, eight inches, and a draft of only eight feet.

Employing a single Fairbanks, Morse ten-cylinder 880 horsepower diesel engine for both propulsion and pumping in each boat reduced the cost and gave better compactness. At marine fires, the boats can hold combat position or maneuver under 200 horsepower, while using the power balance of 680 horsepower for pumping operations.

The fireboats are equipped with KaMeWa propellers, manufactured by the Bird-Johnson Company, which have blades that can be adjusted instantaneously by the pilot, so that propeller thrust can be directed ahead or astern without stopping or reversing the engine. This is accomplished by moving the control lever actuating the governor which regulates the engine speed and control valve. This valve then directs oil through the hollow-bored propeller shaft to set the pitch of the blades.

Since the new fireboats are tied up at the city's water-front firehouses, living quarters on the three were eliminated in their design.

Each vessel's pumping capacity is 6,000 gpm at 150 psi, or 3,000 gpm at 300 psi delivered by three



Architect's sketch of one of the fireboats, showing position of equipment.

deck-mounted monitors on the bow and stern and atop the wheelhouse, which is 23 feet above the water level. Each fireboat is equipped with a liquid foam system supplied by two 500-gallon tanks carrying three per cent foam capable of a total foam discharge of more than 330,000 gallons.

Also a feature is the electro-hydraulic steering gear made by C. H. Wheeler Manufacturing Company, Philadelphia, the same gear called for in design specifications for the *D'Alesandro*. The Wheeler steering gear on the new vessels incorporates a Rapson's slide ram group identical to that used on large cargo and passenger vessels. This type permits the use of small electric motors and is unique on small craft. Operated by a three horsepower motor, the steering gear provides maximum maneuverability by turning the rudder 70 degrees in only 18 seconds at 126,000 pounds torque.

The steering gear includes a precision gear type differential, full storage motion and the use of servo-controlled, forced replenished variable and reversible piston type main pumps. It is designed to insure complete control of the fireboat at all times. In the event of an electrical power failure which would curtail normal operation of the servo-control system, the unit instantly and automatically shifts to hand steering whether cruising or at top speed of 15 knots. Should the electric motor fail at the scene of a fire or during patrol of the port, control of the fire vessel could still be maintained.

Because of the springless motion storage mechanism incorporated in the steering gear, the fireman at the helm is able to quickly and effortlessly turn the wheel to full rudder. When the wheel is turned hard port or starboard, the rudder continues moving until full rudder position is reached.

Since going into service, the fireboats have been busy. A report from Chief Killen shows that in a nine-month period the new boats responded to 80 box alarms which included a ship fire, a "three-alarmer" and an oil flushing job in the harbor. There also were 29 still alarms, 8 water displays for visiting dignitaries and 109 training trips.

The *P. W. Wilkinson*, like her sister craft, has a draft of only eight feet.

Change in FCC Rules

A MEMORANDUM issued from the Office of Civil Defense Mobilization Operational Headquarters, Battle Creek, Michigan, calls attention to the separation of police radio service from the fire radio service. Because of an amendment in Section 10.252 of the Federal Communications Commission rules, the separation must be completed before October 31, 1963.

A number of communities are now operating both police and fire facilities under a single authorization, and OCDM has approved a number of applications for civil defense operation under this dual use. Now, however, communities operating both police and fire functions on a police frequency have less than two years to establish separate station facilities for fire radio service.

To some extent, federal matching funds are available for making necessary procurement or modification of communications equipment. If matching funds were used originally to purchase base and mobile units for a police-fire system, operating on a police frequency, serving a dual civil defense function, and if the civil defense need can still be justified, matching funds may then be requested for establishing a new base station for the fire service, converting mobile fire units to the new fire frequency and converting base and mobile units in the police service to the appropriate frequency.

If matching funds were used originally to purchase only a portion of the equipment and the civil defense need can still be justified, funds may be requested to convert only those base or mobile units which were purchased with the assistance of federal matching funds and for establishing a base station in the fire service when the present base station was purchased with matching funds.

Matching fund contributions will be limited to one half the cost of the changeover for the civil defense portion of the equipment.

Shall We Run? Hide? Or Be Practical?

by Warren Y. Kimball, Managing Editor

TWO results of the Western Powers' stand on the Berlin issue have been an increase in military posture, indicating determination to defend the position of the "Free World," coupled with a renewed interest in civil defense. Both of these facets were covered in President Kennedy's television address to the American people over the Berlin issue.

After 20 years of general indifference, there appears to be a public reaction that civil defense now is one of the essential ingredients of the American defense posture and accordingly calls for action by individual citizens as well as their local, state, and federal government representatives.

One of the chief reasons for previous public apathy was the confusion among the ever-changing public officials charged with responsibility for civil defense. Opinion oscillated between the building of "bomb shelters" at a potential cost of many billions of dollars or mass evacuation of cities which were to be abandoned to obliteration.

The policy of the Federal Government, set forth by President Kennedy, has been that while it may not be practicable to provide shelters for the public adequate to withstand the blast from nuclear weapons, many lives might be saved by urging citizens to build shelters designed to offer protection against radioactive fallout downwind of any nuclear blast. Civil defense authorities have been prompt to hand out plans for such shelters. The press and television have been replete with accounts of modern Robinson Crusoes who have spent a few days in well stocked, lighted and ventilated enclosures free from radioactivity. Public funds are being proposed to provide such shelters in official buildings and in public schools.

More recently, the successful evacuation of thousands of citizens in coastal areas of Texas before Hurricane Carla has revived interest in "mass evacuation" or flight as a defense against atomic warfare. There seemed to be little appreciation of the fact that, for this hurricane, the public had many hours of warning and only needed to get to higher ground for relative safety. In atomic attack of modern warfare, there probably would be little or no warning. Persons fleeing a city probably would have no protection against blast or fallout and might be no safer at their emergency location.

If a nuclear warhead deviates five or ten miles from its target objective, it still may devastate a city. But, if the evacuation route is toward this path of deviation, deaths and injuries will be multiplied. Another factor to consider is that the enemy's military authorities, if

FOR YEARS THOSE OF US WHO HAVE TOILED IN THE VINEYARDS OF SUBURBAN CIVIL DEFENSE HAVE BEEN CONCERNED WITH THE PROBLEM OF HOW TO MAINTAIN LAW AND ORDER FOLLOWING A NUCLEAR ASSAULT.
THE BIG CITIES WOULD, OF COURSE, BE ANNIHILATED THEREBY SIMPLIFYING THEIR CIVIL DEFENSE PROBLEMS IMMEASURABLY. HOWEVER, FOR THOSE OF US IN SUBURBIA THERE ARE BOUND TO BE COMPLICATIONS.
WE WOULD BE SUBJECT TO MASS ONSLAUGHTS OF REFUGEES FROM THE CITY. WHILE OUR HEARTS, AS ALL HEARTS MUST, GO OUT TO THESE VICTIMS THEY DO POSE A THREAT TO OUR CAREFULLY PLANNED PROGRAM.
HOW CAN ONE TELL A RADIO-ACTIVE MOB THAT THEY WOULDN'T BE HAPPY IN OUR TOWN? NO, WE CAN ONLY PRESERVE OUR WAY OF LIFE BY BARRICADING OUR STREETS AND RE-DIRECTING ALL MIGRANT TRAFFIC TO THE PUBLIC HIGHWAYS, AIDING THEM PERHAPS, WITH IMPROVED DIRECTIONAL SIGNS AND FREE ROAD MAPS.
BUT WHEN MAN'S SURVIVAL IS AT STAKE HE MAY WELL SURRENDER TO THE BASER INSTINCTS. OUR BARRICADES MIGHT HAVE TO BE DEFENDED BY FORCE OF ARMS. BUT JUST AS WE ARE WILLING TO GO TO WAR TO DEFEND OUR FREEDOM SO WE SHALL BE WILLING TO DEFEND WHAT'S LEFT OF IT BY MANNING THE SUBURBAN BARRICADES!
IN SUBURBAN CIVIL DEFENSE OUR MOTTO IS: IF YOU CAN'T GET YOURSELF A RUSSIAN, SETTLE FOR AN AMERICAN.
10-1

(Reprinted by permission of the Hall Syndicate, Inc.)

charged with the responsibility of destroying a city, can be expected to use as many bombs as necessary to blanket the entire metropolitan area.

Once a city is abandoned, it is virtually defenseless against conflagration. Thus, even false threats of attack might prove destructive if the fire protection forces are withdrawn. In one large metropolitan city the civil defense officials recently adopted a policy of mass evacuation which they insisted required the fire department to leave town. The fire department's answer was, "All right, you get the people out and we will serve as rear guard. When you tell us that the people are safe we will evacuate our men and equipment." The fire department was aware that any of the thousands of routine fires which it controls every year could destroy the city once the department had left and that a few saboteurs would have little difficulty in promoting a general conflagration.

All this brings us to the fact that official civil defense policy thus far fails to appreciate that fire is still a major threat to the populace in time of war. American cities are among the most combustible in the world and only the constant vigilance of over a million fire fighters with thousands of pieces of apparatus prevent their destruction. Virtually, nothing has been done from a defense point of view to make American cities less vulnerable to fire. Combustible buildings are packed together, often no more than 10 feet apart. In many of the most hazardous areas, climate-wise, such as southern California, fire breeding wooden shingle roofs are tolerated in great profusion.

A report on shelters in the Boston *Herald* for Sept. 25, by Representative W. H. Bates, R., Salem, Mass., contained the following statement:

"A 10 megaton bomb would dig a crater 240 feet deep and 2,500 feet in diameter. . . . wooden buildings would burn to a radius of 25 miles.

"This means that persons in basement fallout shelters would be trapped with a burning building over their heads. With half of the State's 5 million people living within 15 miles of the State House and 80 per cent living within 25 miles of target areas serious questions are being raised as to the value of 'fallout shelters' as contrasted with 'blast' shelters."

More recently the Washington *Post* printed a report that the civil defense authorities for the District of Columbia had decreed that an area within a 10-mile radius of the National Capitol was within the anticipated blast zone so that fallout shelters would be ineffective. Accordingly, evacuation would be the official defense policy assuming that sufficient warning was given to move more than a million people outside the danger zone. If not, individuals would have to seek such shelter as might be found and hope that any bomb might be misdirected from their particular area.

It should be realized that approximately 50 per cent of the Nation's population and a far greater proportion of its industry is concentrated in a relatively few metropolitan industrial centers which would be prime targets for blast effects from atomic weapons. Much of the modern construction does not even have basements for use as potential fallout shelters but does have great expanses of glass walls which would contribute to the most terrible injuries in almost any explosion. The explosion of a munitions vessel in the harbor of Halifax, N.S. in 1917 caused terrific casualties including much blindness from flying glass. What would happen to our modern schools, industrial buildings, office buildings and the like which are substantially glass-enclosed?

But the problem of the fire fighter is still substantially that of controlling fires and conflagrations that would most certainly follow any attack or major explosion. The prime job is still to get rid of needless combustibles. It is apparently forgotten that the historic Chicago fire spread in a large measure due to wooden sidewalks, fences, sheds, etc., as well as by direct ignition of buildings and that the historic Boston conflagration spread chiefly due to combustible trim on the upper floors of the large mercantile and warehouse structures. Yet we still have vacant lots filled with rubbish and weeds, all sorts of backyard sheds, wooden fences and patio enclosures that virtually link thousands of wooden buildings into one vast potential train of destruction.

We often hear that, due to increases in taxes, our communities cannot afford fire departments which fire authorities say are necessary in peacetime, let alone in times of national crisis and survival. The fact is overlooked that the sums which individual citizens are asked to spend for private and public shelters are many times the amount that would be needed to make cities safer from fire. We have previously stated that an additional dollar a month per family would go far toward providing a more adequate level of municipal fire protection whereas sums of $600 to $10,000 per family are talked about as the cost of private fallout shelters in which many of the occupants might be roasted, if not killed, by suffocation or blast.

Fire is a prime weapon of war but fire defense as a prime factor in civil defense is still virtually neglected in the United States. There is no national policy to see that an adequate number of trained men will be available for fighting such fires as may occur. In fact, in previous wars, fire departments have been an important source for military manpower and frequently were operated on a skeleton basis.

One thing the defense authorities should do very quickly is to determine the manpower requirements for fire defense, particularly in critical target areas. They should determine whether fire fighters, many of whom are members of military reserve units, are more important to national survival in the service in which they alone possess the essential skills. Fires due to atomic warfare are not those that can be handled effectively by untrained "auxiliaries" in the absence of sufficient trained fire fighters.

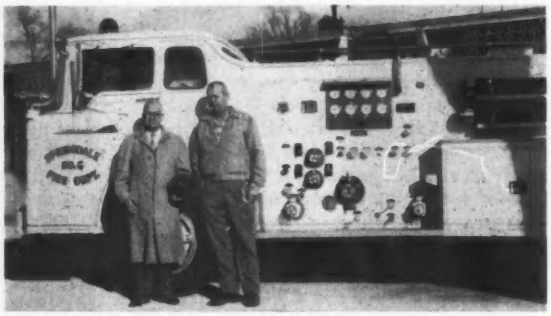
What should be the role of the volunteer firemen who protect the majority of the satellite communities in metropolitan industrial areas? At least 90 per cent of American fire fighters are on a volunteer or part-time basis. Will these men be available or will they be drained off to meet industrial and military demands? Some volunteer departments right now are having difficulty in retaining sufficient active young men for their normal needs in peacetime.

Millions of dollars are being spent on "shelter surveys." We have heard of no recent surveys of wartime fire vulnerability. In fact, the excellent survey reports covering normal peacetime municipal fire protection requirements, which have long been available without charge to American cities, are all too often filed away as a "utopian dream" which costs more than the taxpayers have been educated to demand. Unfortunately, some municipal "experts" deplore the heavy expense of fire departments.

Perhaps all of this must be as foreseen in the Apocalypse written by St. John the Divine (Revelation 16:12) "And the cities of the nations fell." At least, the stage would seem to be set in that direction as long as the public and the civil defense authorities fail to recognize FIRE as the great weapon of destruction that it has been historically and still remains.

REGIONAL ROUND-UP

A spot check of progress and plans of NFPA member fire departments and other fire service organizations in various regions.



Fire Chief Lon Cook (right), Springdale, Arkansas, and Mayor John Powell with the Springdale Fire Department's new 750 gpm pumper.

WITHIN the past two years, the *Little Rock* Fire Department has constructed three fully air-conditioned fire stations, replacing four obsolete houses, reports Fire Chief Gann L. Nalley. Existing stations were air-conditioned, and another new station will be built upon settlement in court of a proposed annexed area of about 17.2 square miles. The new stations were built to redistrict the expanding city. Two new district chiefs were added for the southwest section of the city, and new positions of fire marshal and training officer (ranking as district chiefs) were created. A recent addition is a 1,000 gpm American LaFrance pumper, giving the department a total of 22 fire fighting vehicles.

The firemen's training program includes two hours of instruction five days a week, regular drill tower activities, and district study followed by written examinations on all subjects. Recently, all men completed 26 additional hours of Advanced First Aid Training.

The *Springdale* Fire Department, commanded by Chief Lon Cook, includes 6 full-time firemen and 25 volunteers, reports Walter A. Watkins, Publicity Chairman. The chief, assistant chief and two captains are part-paid volunteers. Recently put in service was a fourth pumper, a completely equipped 750 gpm Howe-Ford cab-forward unit. A new $800 marine rescue unit was recently purchased with the proceeds of a fire department-sponsored Pancake Breakfast. The unit is a 16-foot flat bottom aluminum boat, with 10 horsepower motor and 18-foot trailer. The department, in cooperation with the local Civil Defense organization, plans to buy a $6,000 rescue unit with matching funds which will be manned by the fire department and the auxiliary.

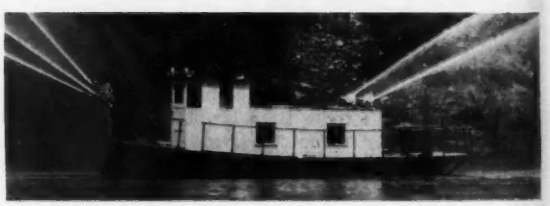
Springdale won first place-State of Arkansas, in last year's NFPA Fire Prevention contest and honorable mention in its class in the 1960 National Inter-Chamber Fire Safety Contest.

Losses from fire in Arkansas have been declining since 1958, reports Captain W. C. Struebing, Fire Marshal Section, Arkansas State Police. He attributes this to the combined effort of the fire service and separate organizations which have helped to expand the state's building inspection and fire prevention program. The Arkansas Fire Prevention Association holds at least five city inspections each year, and the Arkansas Inspection and Rating Bureau conducts continual inspections. Assistance from School Fire Marshals, a 12-year-old program supervised by the State Department of Education, makes monthly school inspections possible during the school term. By law, all school districts must participate in this program to obtain their state aid.

Members of the Fire Marshal Section assist in annual training for school inspectors, regional firemen's training schools, and an annual Fire Instructors' Conference.

A law, passed this year, aims at better control of fireworks sales in Arkansas.

Rescue operations was the subject of the two-week Regional Fire Schools held in 15 regions throughout Arkansas, reports Whit Murphy, State Fire Instructor. The same instruction was given for two consecutive nights, so that one-half of each fire department could attend each night.



This fireboat was built and equipped by the Monroe, Louisiana, Fire Department.

The *Baton Rouge* Fire Department, with 278 employees, headed by Chief O. A. Sevier, operates 13 fire stations and a fire alarm headquarters. This year, the department put special emphasis on home fire protection. Color slides made during a local home fire drill are being shown to community groups. Another demonstration aid is a house model with various types of electrical hazards. One of the most recent department projects was the com-

pilation of a list of invalids and the use of invalid markers. A billboard in front of the Fire Alarm Headquarters displays fire prevention slogans, and an employees' "Suggestion Box" has been instituted. When a suggestion is put in operation, the author is given time off with pay.

Baton Rouge was the site of the Louisiana State Fire College 30th Annual Short Course in September.

A fireboat has been put in service in *Monroe* to protect the city's half-million dollar boating industry. Built and equipped in the fire department shop, the 8-ton unit has a 36-foot long all-steel hull and a 9-foot beam. It is fully equipped to handle four 1½-inch and one 2½-inch lines and one high-pressure booster line. Also new to the department is a 53-foot aerial ladder truck carrying a 1,500 watt power plant and an air compressor for breaching brick walls. A new 3-lane fire station, now under construction, will replace an outmoded station in the city's college area, reports H. L. Hales, chief of Monroe's Fire Department.

Howard L. Dey, Superintendent of Fire, *New Orleans*, reports the construction of three new fire stations. Also planned is a combination fire and police station to be built in the expanding eastern section of the city. New equipment now in service includes three 85-foot aerial ladder trucks, two 750 gpm pumpers, and six aluminized rescue units.

Jeanerette, population 6,000, has a Central Fire Station housing two 500 gpm Darley pumpers. A new 750 gpm Darley Champion, a 3-stage pumper built on a Ford chassis, is housed in the town's newly constructed second fire station. All hose lines are equipped with fog nozzles, and, writes Chief C. R. Mequet, the Jeanerette Fire Department was one of the first to use fog nozzles in that part of Louisiana.

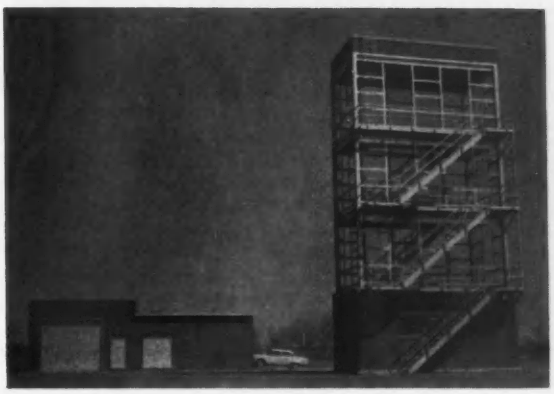
A Louisiana State Law requires that plans and specifications for all new and altered constructions, with the exception of private single dwellings, be submitted to and approved by the Department of the State Fire Marshal prior to actual construction. The department issues free booklets and bulletins containing the general requirements for certain occupancies This law was put in effect to assure built-in safety features in all new buildings, explains John E. Coon, State Fire Marshal.

The Louisiana Forestry Commission has been concentrating on review training for the last several months, reports State Forester James E. Mixon. Subjects covered included appraisal of fire damage, radiological instrumentation, forest law enforcement, instructor training, and large fire organization and field problems.

The *Lubbock* Fire Department has 180 members, operating three platoons in a 56-hour week, reports Fire Chief Glenn W. Smith. Within the past year a new headquarters station and a new residential type sub-station were put in service. This gives the city a total of eight stations, all built within the past 13 years. Lubbock also has a new telephone fire alarm system, just completed.

Recent activities included an intensive dwelling inspection and weed mowing. All vacant lots in the city were mowed by off-duty firemen, using eight tractor power mowers and shredders. When used on a smaller, experimental basis in the summer of 1960, the mowing program resulted in a 30 per cent decrease in the number of grass and weed fires, as well as a decrease in health hazards.

Central Fire Station, Lubbock, Texas.



Drill tower and training building of the Lubbock, Texas, Fire Department.

The *Victoria* Fire Department is constructing a completely sprinklered pre-stressed concrete and brick drill tower, according to Chief M. S. Shaw. Located on 3 acres of recently purchased land, the tower will include three stories with basement. Approximate cost will be $15,000. Future fire department plans call for the construction of sub-station No. 4 and the purchase of an additional 750 gpm pumper.

"The greatest significant advancement in the *Dallas* Fire Department has been in the field of fire prevention and public relations," writes Chief C. N. Penn. Much credit for this advancement goes to a 15-man Fire Prevention Advisory Committee appointed by the chief several years ago "to study and recommend plans and methods for achieving better inner-department communications." The committee is composed of fire fighters

George E. McCormick (center) presenting individual awards to members of Number 7 District, "B" Shift at First Annual Firemen's Awards Banquet, held in Dallas.

No. 49 Fire Station (left), Houston, Texas, was placed in service last April. The department's three Howe 1,000 gpm pumpers (above) were purchased in 1959.

representing all ranks — privates, drivers, lieutenants, captains, and a battalion chief who serves as chairman.

Fire department activities resulting from the Committee's recommendations include: in-service company inspections of homes and shopping centers; in-service company participation in school fire drills; open house at all fire stations in observance of the Seventy-fifth Diamond Jubilee, including exhibition drills; a Thrill Show at the Texas State Fair; home inspections by Junior Inspectors conducted in cooperation with the Dallas Independent School District; and the First Annual Firemen's Awards Banquet, sponsored by the Dallas Association of Insurance Agents in March.

Battalion Chief W. H. Sharp, chairman of the Fire Prevention Advisory Committee, was named Outstanding Fire Prevention Man of the Year at the Awards Banquet. Since then he has become chief of the *Garland* Fire Department.

The *Houston* Fire Department, commanded by Chief C. M. Bullock, protects an area of 352 square miles, with 1,180 men, 164 pieces of apparatus and 51 fire stations. In the past three years more than a million dollars has been spent in a capital improvement program. Nine new stations were built, ten station sites and twenty-nine pieces of apparatus were purchased.

A new station, No. 43, was put in service last spring; architects are drawing plans for two more, and the department is acquiring property for a third new station. Seventy recruits, graduated from the training school in May, were assigned to several stations.

A new development is the department's selective call system. This was acquired after the city expanded in 1958, and, since several new stations were added beyond existing fire alarm lines, selective call receivers and transmitters were installed. These receivers have also been put in service in several old stations, and eventually all stations will be so equipped. Each new station also is provided with an auxiliary generator with enough power to furnish electricity for emergency lights and communications.

Texas' champion pumper racing team is from Rosenberg, Texas. Standing: P. K. Rude, Jr.; Ben Chupik; C. H. Boring, Jr.; and Bill Talasek, Jr. Kneeling: Larry Rude and Marvin Mensik.

The 85th Annual convention of the State Firemen's and Fire Marshals' Association of Texas was held in *Austin* in June and Chief Vernon B. Rucker of Killeen was elected president. The Association has begun publication of a monthly newsletter. Published by Ben Norman, Jr., and staff of *Killeen*, it will be sent to all Texas fire departments.

The Texas Forest Service works closely with city and community fire departments, aiding in the development and training of rural departments. These departments, in turn, cooperate by warning local citizens when fire danger is high. They also instruct the citizens in the proper methods of trash burning during such hazardous periods.

Reporting for Director A. D Folweiler, John Haislet writes that newspapers, television and radio stations serving East Texas now use Texas Forest Service fire danger information on their daily weathercasts.

The Forest Service annual fire exercise was held recently in Trinity County. Designed to train both the Service staff and crews and cooperating crews to handle large forest fire operations, the two-day exercise involved 18 tractor-plow units and nearly 80 men. Crews and men from local wood-using industries and the U. S. Forest Service also participated. A recently acquired mobile field office and a portable power supply has increased the effectiveness of the fire boss and his staff in controlling large fires.

In Texas, Commissioner of Insurance William A. Harrison also serves as State Fire Marshal. In the latter capacity, Harrison assists the sponsors in conducting state and regional firemen's training schools. He also cooperates with The Texas Insurance Fieldmen's Association in the fire inspection surveys of cities and towns. Other duties of the fire marshal include the enforcement of all laws relating to arson and similar offenses, the Texas Fire Escape Law, Regulatory Fireworks Law, and the law pertaining to the elimination of fire hazards. His department works closely with the Texas Arson Conference, Inc., an organization formed to suppress arson through intensive training in conducting fire investigations and the proper procedure for prosecution of arson.

The State Fire Marshal also sponsors the teaching of fire prevention as a regular course in all public and private schools, supplying the teachers with a fire prevention handbook and other fire prevention literature.

Through the adoption of a suggested Fire Marshal Ordinance in incorporated cities and towns, the office of City Fire Marshal is created. His duties and powers are similar to those of the State Fire Marshal. It is

(*Continued on page 26*)

An Old QUESTION:
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Additional GIFT MEMBERSHIP forms available on request.

HOW TO MAKE SOME

TEACHING AND TRAINING AIDS

Here are some photos of instructional aids which can be made from commonly available materials. Fire officers can easily develop brief talks to supplement the demonstration of each of these items, or perhaps develop more functional devices for use in training or instructing the general public.

FOR teaching fire safety to the general public and for training fire department personnel, today's fire department can create a variety of models and other aids for instruction.

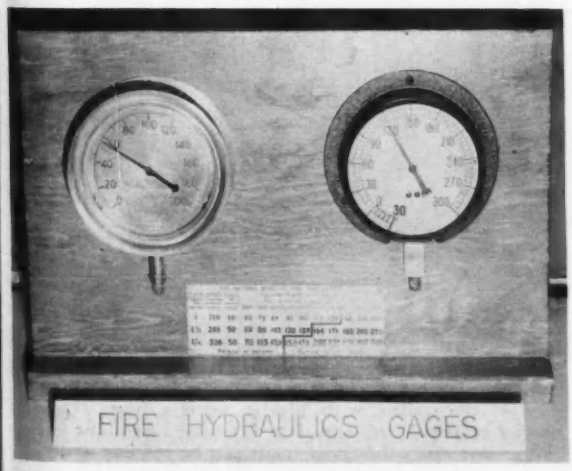
Such equipment, when designed and made properly, serves to capture the listener's visual attention when a fundamental is being stressed. His aural or hearing attention is captured by the speaker's or instructor's voice, or perhaps by some sound created by the teaching aid, such as a miniature dust explosion. To give more stimulation to his learning processes, it may be practical to let him handle or manipulate the training aid to study the separate motions or sequences of a particular fundamental.

For many years a general maxim of teaching has been: *when instruction appeals to the learner's senses of sight, hearing, taste, feeling and smell, he learns better.* Good teachers also realize that every person, at a given moment in a certain environment, has a limited "span of attention" which is affected somewhat by each of his senses. To capture and hold his attention therefore requires forceful presentation and, to some extent, creation of excitement by the instructor.

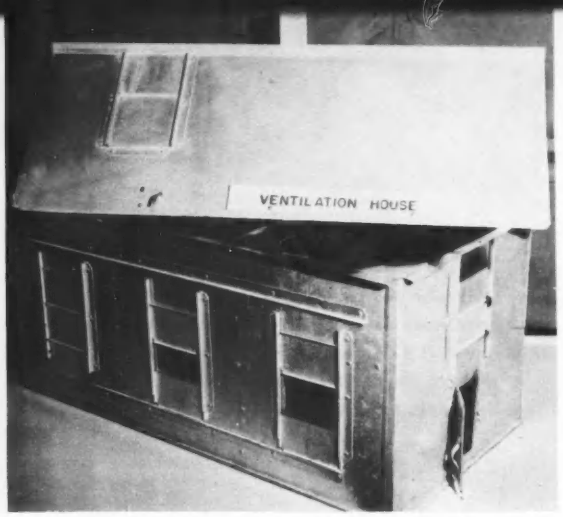
Thus, while the speaker may have an excellent vocal delivery and strong personality, chances are that he can create a more effective, more lasting presentation by using different items to demonstrate or illustrate particular points of his talk. The popularity of the articles "Useful Kits for Fire Prevention Demonstrations" reprinted from FIREMEN magazine last year indicates the extent of fire department interest in such instructional aids.

On these pages are illustrations of fifteen other useful items, ranging from cutouts to functioning models. The Department of Defense photos and information were made available by NFPA member John N. Cardoulis of St. John's, Newfoundland, formerly with the Northeast Air Command, where these instructional aids were used. Fire departments may be able to adapt these for training and public education programs.

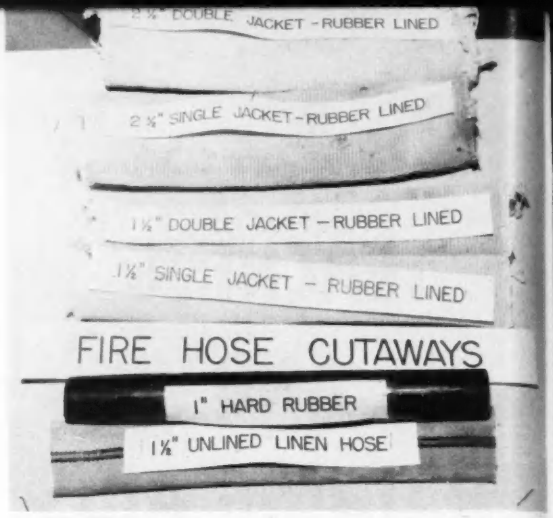
FOR FIRE DEPARTMENT TRAINING



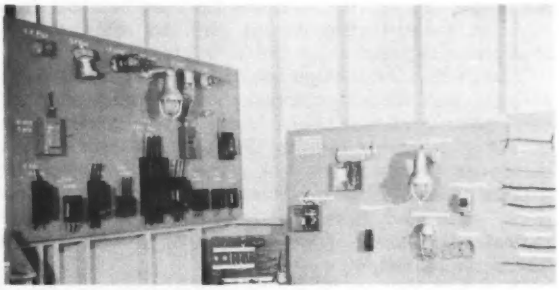
(Left) Pressure and compound gages from a pumper are mounted on board. Bourdon tubes and springs are removed. Steel rod, ⅛-inch diameter, is welded on back of each needle indicator, with shaft extending through rear of gage and back of mounting board. Piece of cork is attached to end of shaft. Gage readings can be demonstrated by turning cork, showing dangers of excessive vacuum and pressure.



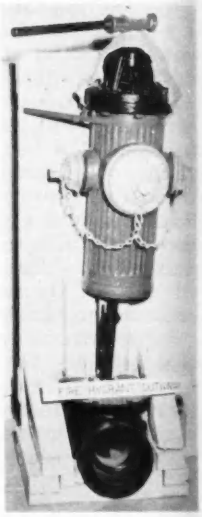
This three room ventilation house is made of aluminum. Windows and doors work, attic space has side louvres. Roof openings, interior stairways, corridors and partitions are included. Small smoldering fires can demonstrate need for vertical and cross ventilation, dangers of back-draft, and methods of interior and exterior fire fighting.


2½" DOUBLE JACKET - RUBBER LINED
2½" SINGLE JACKET - RUBBER LINED
1½" DOUBLE JACKET - RUBBER LINED
1½" SINGLE JACKET - RUBBER LINED
FIRE HOSE CUTAWAYS
1" HARD RUBBER
1½" UNLINED LINEN HOSE

Cutaways should show all types and sizes of fire hose used by the department. Additional data might include: operating and test pressures, method of marking for identification, dates of annual hose tests, drying, storing and cleaning procedures, and type of coupling and coupling threads used by the department.



Two 4- by 8-ft. panel boards hold junction boxes, circuit breakers, vapor and explosion-proof fixtures, different types and sizes of wire, fuses, plugs and outlets and other electrical equipment which fire department inspectors should recognize and understand. Small board in center displays common electrical hazards.



(Right) Several cutaway sections of fire hydrant can demonstrate its functions. Hydrant wrench is placed on stem nut and turned to show operation of shaft and seating of valve.

Metal pan 48 inches square and 10 inches deep has four handles. At left is wooden model of a dock area with three piers, each having different type of piling construction. Warehouse, miniature flammable liquid tanks, pipe lines and hydrants are also featured. Soft rubber surgical hose is used to simulate hose lines. Actual fires can be started under wharf and inside model ships which float on 6 inches of water in pan. Fire control measures can include how and when to beach a ship, what to do when a ship lists, how to secure hose lines, etc.

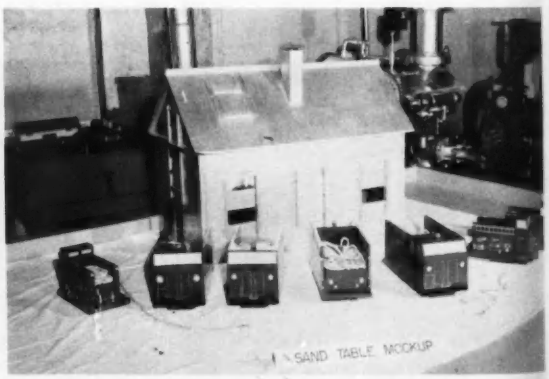
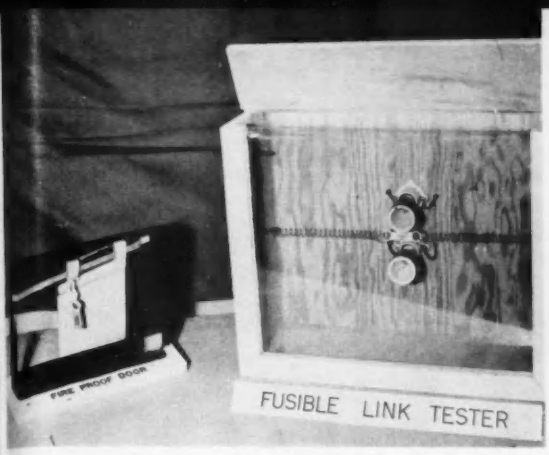
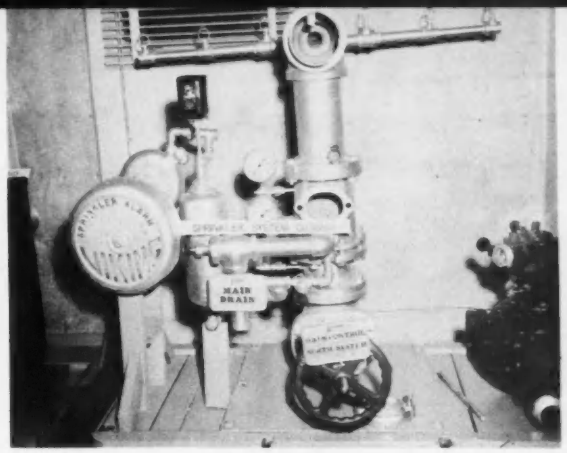


Table top is used to show hose loads and placement of vehicles for attack on building fire. Apparatus, in this picture Air Force crash trucks, can be made of wood. Nylon clothesline with plastic nozzles from 2½-gallon water extinguishers simulate fire hose. Straight and reverse lays and other hose loads can be studied easily.

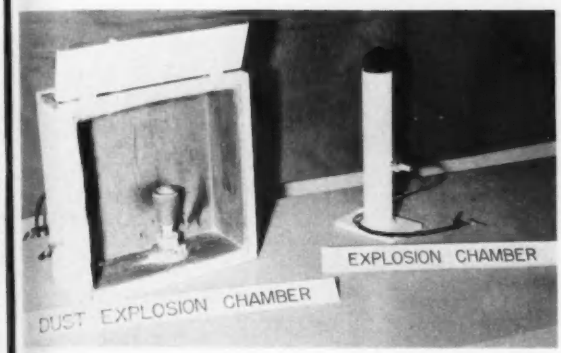


Miniature fire door at left has weight and rollers. Fusible link operates when heat is applied. Entire unit is 12 inches high, 15 inches long. Link tester at right is 12 inches high, 18 inches long, 8 inches deep, and has a safety glass front. Two cone type heating units are 4 inches apart. Springs attached to each side of box can hold fusible link (lower) or sprinkler head (upper).

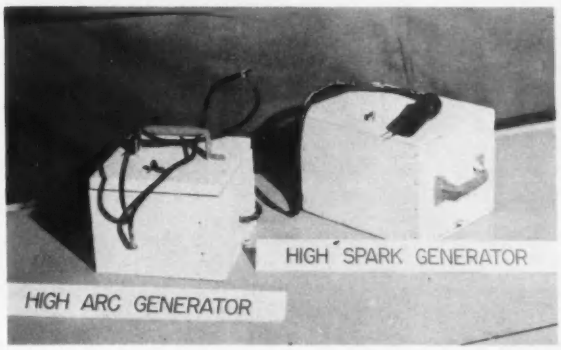


Sprinkler system and centrifugal pump are cutaway models, showing outside stem and yoke valve, clapper valve, water alarm, pump impellers, and other essentials. Entire unit is mounted on cart for easy moving to training classrooms. Relief valve on pump and elements of sprinkler installation may be disassembled and reassembled by hand. Charts are useful with this training aid.

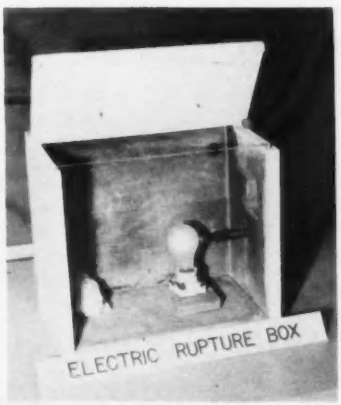
FOR FIRE PREVENTION EDUCATION



Dust explosion chamber at left is made of ½-inch plywood. Front panel is safety glass, top is hinged cover. Heating coil is in center. When this is energized to about 600 degrees F., dust is applied through top by squeezing dust filled (flour, lint o aluminum) rubber bulb. Flame goes up 18 inches. Unit at right is used for demonstrating flammable liquids hazards.

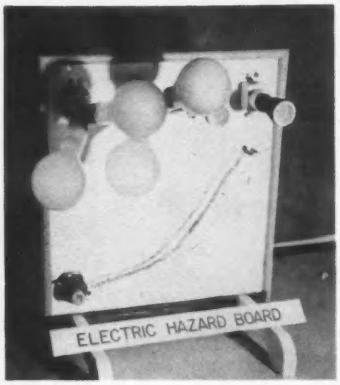


Arc and spark generators are installed in wooden boxes 9 inches square. Box at left has two leads extending 24 inches outside from a 110 volt spark coil, with toggle switch on top. Arcing of wires can be shown with this equipment. Spark coil and transformer is in box at right with two leads and 24 volt switch on top. This produces spark for igniting gasoline in explosion chamber at left.



Rupture box is 14 inches high, 16 inches long, 8 inches deep, with flush type socket placed off-center inside box behind safety glass. Metal plunger on spring is installed at correct height to break 60 watt bulb. Cover is on hinges. Gasoline-soaked rag (squeeze out liquid) is placed in box. Bulb is lighted then broken when plunger is pulled. Flame bursts upward about 18 inches.

Familiar fire triangle is made of wood, 26 inches on each side and 6 inches deep. Glass panels on front are painted yellow for fuel, red for heat, and green for oxygen. Electric bulbs are behind panels. Three switches (right) are operated to illuminate bulbs and word "Fire" shows only when three sides of triangle are lighted. A 6-foot plug-in cord extends through back.



Wooden board 20 inches square has removable stand and four receptacles, each controlled by switches on back. A fuse receptacle tied in the line is at lower left with electrical heating coil wire extending to porcelain pole 12 inches away. Four 300 watt bulbs, two cone type heating units, and a 3 ampere fuse are used. Switches are placed on at 10-second intervals. Wire becomes hot when three lights are on, fuse blows when fourth is turned on.

Cutaway fire extinguishers help to explain operation of unit. While most of the ones shown here are old models, they still may be found in some buildings and fire department personnel should be able to recognize them and know their limitations. When possible, up-to-date models should be shown. Charts describing extinguisher inspection, recharging precautions and extinguisher capabilities are useful supplements to these cutaways.

USEFUL EQUIPMENT FOR DEMONSTRATING FIRE AND FIRE PROTECTION

SOME fire departments have inquired about certain items which can be used for miniature demonstrations in training or for public education. Shown below is a list of such equipment which supplemented the instructional aids shown on the previous pages.

A special cabinet was constructed to store all of this equipment. Made of wood, it was 48 inches long, 24 inches wide, and 32 inches high, featured two drawers, two extension leaves, and an aluminum top. Casters were on the legs so that the entire unit and equipment could be moved easily.

The items below were used in demonstrating the chemistry of fire, fire control and extinguishment, and general fire hazards.

Chemistry of Fire:

1. Fire triangle
2. High spark generator
3. Oxygen bottle (walk around)
4. Vapor trough
5. Alcohol lamp and stand
6. Two metal pans 12″ x 10″ x ½″
7. A pair of 8″ forceps
8. Ten 16 oz. bottles with stoppers
9. One open coil type cone heating element
10. One pound potassium chlorate
11. Three beakers 1,000 milliliter capacity
12. Four beakers 500 milliliter capacity
13. Four beakers 300 milliliter capacity
14. Two beakers 50 milliliter capacity
15. Two flasks 2,000 milliliter capacity
16. One package of steel wool
17. Gasoline
18. Sulfuric acid
19. Alcohol
20. Kerosene or other fuel
21. Sugar
22. Flour
23. Soda
24. Starch
25. Aluminum dust
26. Twelve eye droppers
27. Rags
28. Extension cord, 25-ft. heavy duty
29. Paper
30. Candles
31. Connecting cables for explosion chamber
32. Oxygen hose 24″ long
33. Cigarettes
34. Matches
35. Railroad tank car (miniature)
36. Hot plate (one burner)
37. One metal pan 14″ x 16″ x 2″
38. Wooden blocks 2″ x 2″ x 2″
39. Explosion chamber training aid
40. Ignition temperature tester

Fire Control and Extinguishment:

1. 15 lb. CO_2 fire extinguisher cutaway
2. 1 gal. CTC fire extinguisher cutaway
3. 1 gal. CB fire extinguisher cutaway
4. 1 qt. CTC fire extinguisher cutaway
5. 2½ gal. soda acid fire extinguisher cutaway
6. 2½ gal. foam fire extinguisher cutaway
7. 2½ gal. water fire extinguisher cutaway
8. 15 lb. dry chemical fire extinguisher cutaway
9. Chemical foam
10. Mechanical foam
11. Carbon dioxide
12. Carbon tetrachloride
13. Chlorobromomethane
14. Dry powder
15. Mineral soil
16. Same glassware and pans as in "Chemistry of Fire"
17. Electric conductivity tester training aid
18. CO_2 transfer pump unit
19. Calcium chloride
20. Nitrogen
21. Scrap paper
22. Gasoline
23. Kerosene
24. Alcohol
25. 1 metal dipper
26. Wooden matches
27. Rags
28. A pair of 10″ forceps
29. Three buckets
30. Fire extinguisher tags
31. Fire extinguisher seals and sealer
32. Scales for weight testing

Fire Prevention Inspections:

1. Electric light receptacle
2. Electric hazard board
3. High voltage spark generator
4. Static electricity training aid
5. Electric arc training aid
6. One metal waste container
7. One wooden waste container
8. Cigarettes
9. Glassware and pans as listed in "Chemistry of Fire"
10. Gasoline
11. Rags
12. Matches
13. Three bus type fuses (3 amperes)
14. Pennies
15. Four 300 watt light bulbs
16. Four two-way light sockets
17. Two open coil, cone type heaters
18. Four 60 watt light bulbs
19. Eye droppers

IAFC President, Chief Edward F. Deignan, Elizabeth, New Jersey.

IAFC First Vice President, Chief Lewis A. Marshall, Providence, Rhode Island.

IAFC Second Vice President, Chief Raul Gandara, Puerto Rico.

IAFC Treasurer, Chief G. A. Mitchell, Opelika, Alabama.

Newly elected officers of the International Association of Fire Chiefs.

Highlights of the 88th IAFC Conference

APPROXIMATELY 2,400 members of the fire service, manufacturers and guests from the United States and Canada registered for the 88th Conference of the International Association of Fire Chiefs in Las Vegas, Nevada, September 25–28. As reported in the September issue, Chief C. D. Williams and his Las Vegas Fire Department served as hosts.

All sessions of the meeting were held at the beautiful Convention Center, which is about ¾ of a mile away from the famous Las Vegas Strip. This six million dollar structure has a spacious air-conditioned hall which easily housed the modern fire apparatus, equipment and display booths of the more than 100 manufacturers who exhibited at the Conference. In the same building are a number of meeting rooms and spacious auditoriums in which the Conference sessions were held. Despite the fact that a large group attended the meeting of the Pacific Coast Inter-Mountain Association of Fire Chiefs, held on Monday followed by a joint Memorial Service with the IAFC, the convention building had ample space for these activities.

The exhibit of the Waterous Company included this well-maintained steamer with a pump capacity of 325 gpm. It was manufactured in 1887.

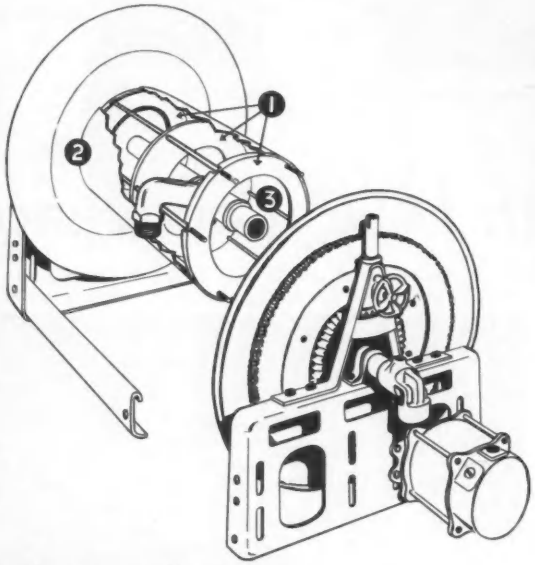
The Miami Fire Department brought this miniature ladder truck to the Conference all the way from Florida. As shown in the sign below, it was built by members of the department in their off-duty hours.

Most popular feature of the IAFC Conference developed on Wednesday afternoon, when four "brainstorming" sessions were held simultaneously. In these sessions, panels of fire chiefs and selected personnel answered questions on subjects of current interest to the fire service. Each of the sessions was fully attended and brought a great deal of audience participation. This was the first year that this type of activity was scheduled at an IAFC Conference, but it turned out to be popular and probably will be a regular feature of future meetings.

Other Conference topics included an address by Frank B. Ellis, Director of OCDM; J. Roger Deas, of the American Can Co.; Francis L. Brannigan, of the U. S. Atomic Energy Commission; Dr. Leonard C. Silvern, of the Hughes Aircraft Co., and a representative of the American Red Cross who showed a film on the earthquake disaster in Chile.

On Thursday, voting took place for the election of officers of the IAFC for the coming year. Chief Edward Deignan, Elizabeth, New Jersey, moved up to president of the Association. Chief Lewis Marshall, of Providence, Rhode Island, became first vice president, and Raul Gandara, Chief of the fire service of Puerto Rico, was elected second vice president. Chief G. A. Mitchell, Opelika, Alabama, was re-elected as treasurer. The 89th Conference of the International Association of Fire Chiefs is scheduled to be held in Toronto, Ontario, Canada, in September, next year.

Did You Know?



Hannay reels give you built-in protection against pressure surges.

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Regional Round-Up

(*Continued from page 18*)

Fire danger meter used by East Texas TV stations on their daily weathercasts. KLTV-Tyler was first in the nation to use such a dial. *(Photo by Texas Forest Service)*

through the cooperation of the State Fire Marshal and local fire marshals and fire chiefs that effective fire prevention and fire protection measures are adopted and carried out.

The 32nd Annual Firemen's Training School was attended by 1,657 men representing 440 cities and towns from 15 states, according to Chief Henry D. Smith, Firemen's Training, Texas A. & M. College, College Station. Special emphasis was placed this year on a selected schedule, a combination of subjects from several courses, for LP-Gas dealers and handlers. This was conducted with the cooperation of the Liquefied Petroleum Gas section of the Railroad Commission of Texas and the Texas Butane Dealers' Association.

New courses initiated the past year include a Radiological Monitoring Course for fire service instructors. Instructors for the area schools are trained in classes on campus.

New training material was prepared for a Fire Officer Administrative Course, and a pilot class was conducted with one of the larger fire departments. A number of these classes will be conducted this year. All lesson plans for the staff instructors for Basic Fire Fighting and for the Fire Pump Operation course were revised and updated. New material is being written for the Advanced Fire Fighting course, and the Fire Prevention Training course is being revised.

Fire Chief's Handbook

A PUBLICATION of general interest and usefulness to the fire service is *The Fire Chief's Handbook* published by the Reuben H. Donnelley Corporation. The second edition, printed in 1960, is now in its second printing. It is a completely revised version of the first edition published in 1932.

Fred Shepperd, author of the book, has added many new illustrations and a considerable amount of new text. The book was edited by Donald M. O'Brien, editor of *Fire Engineering*.

Measuring 5¼ by 8 inches, this clothbound book has 566 pages of text covering many facets of fire department operation. Basic training, fire department tools and equipment, fire extinguishing methods, hydraulics, fire ground operations and many other subjects are included in the 27 chapters.

Copies of *The Fire Chief's Handbook* can be obtained by writing to Book Department, Fire Engineering, 466 Lexington Avenue, New York 17, New York. Price is $6 per copy postpaid.

Now! Ice-Pak any injury in just 2 seconds!

Remarkable new discovery! ***NEW KWIK-KOLD INSTANT ICE-PAK. Gives instant cold that lasts up to ½ hour! For sprains, swelling, bruises and minor bleeding. Helps minimize injury, speed recovery.***

Doctors know that prompt application of cold is one of the most important first aid treatments for injury. And *how fast* cold is applied can often make the difference between days, and even weeks, of recuperation.

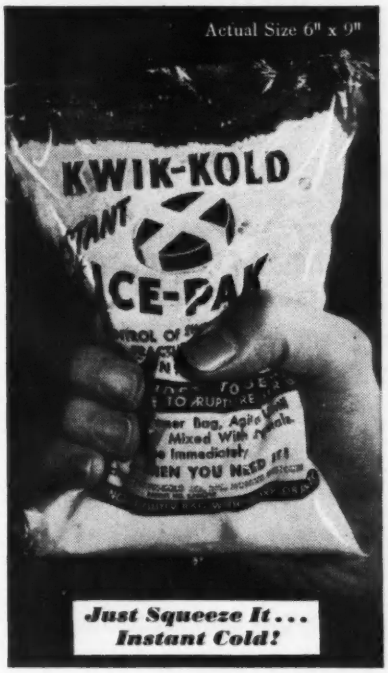
Now a new scientific discovery called KWIK-KOLD makes it possible for anyone—anywhere—to get the medical benefits of cold in a hurry!

New KWIK-KOLD Instant Ice-Pak gives you *instant cold* for any injury. Relieves pain on the spot—reduces swelling and minor bleeding. Much faster and handier to use than old-fashioned ice bags and, unlike ice, is always available, is not messy, is easy to carry on trips.

Quick and easy to apply. Just squeeze the plastic bag and—in just 2 seconds—you get instant cold that *stays cold* up to half an hour! The tough yet flexible plastic bag conforms readily to body contours. Non-toxic and safe, even if the bag is punctured. Keeps for extended periods of time.

Kwik-Kold provides ready relief for athletic injuries. Used by the 1960 U.S. Olympic Team, Kwik-Kold should be standard equipment for all football, basketball, and baseball teams as well as other athletic groups. For all sports injuries—sprains, black eyes, cuts and bruises—Kwik-Kold is handy and effective, indoors, outdoors, in all seasons.

New KWIK-KOLD belongs in the first aid kit of everyone who has to deal with sudden injuries. Get Kwik-Kold from your local first aid equipment supplier or write International Latex Corporation, 350 Fifth Avenue, New York 1, N. Y.



Kwik-Kold can be stored at any temperature, always ready for immediate use. Tough yet flexible plastic bag contains dry Cold-Crystals and an inner pouch of special fluid. When you squeeze bag, fluid is released to activate crystals and give *instant cold*. Apply as you would an ice pack. Bag measures 6" x 9", conforms smoothly to body contours, is not lumpy, messy, or drippy. Dispose of bag after use.

How Cold Works in the Treatment of Injuries:

Cold is medically recognized for its value in the treatment of various injuries. In *minor bleeding,* cold has an astringent action on tissues and constricts capillaries, thus acts to reduce blood flow at the site of the wound. By reducing effusion of blood to wound, cold helps reduce *swelling, inflammation, and discoloration* in bruises and sprains. The local anesthetic effect of cold helps *relieve pain.* And because it restricts blood flow to and from the wound, cold slows spread of venom in treating *insect and snake bites.*

How To Use Cold in Emergency First Aid:

Sprains. Elevate injured part to a comfortable position. *Apply cold packs* to sprain to ease swelling and relieve pain.

Bruises, Black Eyes. Apply cold pack promptly to bruise for 20 to 25 minutes. Cold inhibits flow of blood to wound, helps limit discoloration, reduce swelling and pain.

Bleeding. In bleeding from the nose, the head should be kept erect, as lowering the head tends to encourage continued flow of blood. *Apply cold* to the nose, and if the bleeding is from near the tip of nose, pinch the nostrils together for a few minutes. In bleeding from cuts and abrasions, keep the area raised and *apply cold* in conjunction with other prescribed treatment.

Insect & Snake Bite: *For bee, wasp and hornet stings,* remove stinger with sterilized needle or knife point. *Apply cold* to sting to relieve pain and slow absorption of venom. Apply calamine lotion to relieve itching. *For ant, chigger and mosquito bites,* wash affected parts with soap and water, then apply paste of baking soda. *Apply cold* to reduce swelling. *For snake bite,* follow prescribed first aid procedure, *using cold* application on wound to relieve pain and help limit spread of venom.

Sunstroke. For mild sunstroke (marked by headache, fatigue, dizziness and, perhaps, fainting), cool patient off quickly. *Apply cold packs* to head to help lower body temperature.

Minor Burns. Follow recommended first aid procedures to exclude air from burned area and prevent contamination. *Apply cold packs* to relieve pain.

Other Uses. Cold packs may be considered for use in conjunction with other appropriate first aid measures in treating minor head injuries, suspected appendicitis, headache and fever, toothache, and fainting.

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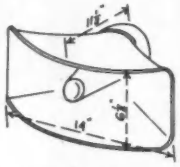
(1) **Model SFD-2** **100 Watt** . .
Up to four times more volume.

(2) **Model SFD-1** **50 Watt** . .
Outperforms competitive units by giving *full* watt-power as rated.



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  ½ as big as two-way radios.
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For Radiation Emergencies

ON OCCASION, when fires or accidents occur which involve radioactive materials, fire departments responding to the scene of the emergency should know whom to contact for technical assistance. In large municipal fire departments and in a number of states, radiological emergency monitoring teams can be dispatched immediately to give help at the scene of emergency. Information about such teams usually is available from the state fire marshal, state atomic energy directors or coordinators, U. S. Department of Labor and U. S. Department of Health, or other state offices. In addition, there are a number of private business organizations which provide technical or professional service on a fee basis.

For some emergencies, particularly when atomic weapons or parts of atomic weapons are involved, the fire department may wish to contact the U. S. Atomic Energy Commission. The AEC has published a mimeographed instructional bulletin plus a map of the United States showing its regional office areas of responsibility for radiological assistance in incidents involving radioactive materials. The map contains a listing of the regional offices plus the post office addresses and telephone numbers as follows:

Region 1 — New York Operations Office, 376 Hudson Street, New York 14, New York — Yukon 9-1000; Region 2 — Oak Ridge Operations Office, P. O. Box E, Oak Ridge, Tennessee — Oak Ridge 5-7486, Ext. 7607 and Oak Ridge 5-8611, Ext. 7607; Region 3 — Savannah River Operations Office, P. O. Box A, Aiken, South Carolina — Aiken, S. C., Midway 9-6211, Ext. 3333 and Augusta, Ga., Park 4-6311, Ext. 3333; Region 4 — Albuquerque Operations Office, P. O. Box 5400, Albuquerque, New Mexico — Alpine 6-4411, Ext. 38267; Region 5 — Chicago Operations Office, 9800 S. Cass Avenue, Argonne, Illinois — Clearwater 7-7711, Ext. 2111 or 541; Region 6 — Idaho Operations Office, P. O. Box 2108, Idaho Falls, Idaho — Jackson 2-6640; Region 7 — San Francisco Operations Office — 2111 Bancroft Way, Berkeley, California, Thornwall 1-5620; Region 8 — Hanford Operations Office, P. O. Box 550, Richland, Washington, Whitehall 2-1111, Ext. 6-5441.

In the regions listed above, Puerto Rico and the Virgin Islands are in Region 2, the Canal Zone is in Region 3, the State of Hawaii is in Region 7 and the State of Alaska is in Region 8.

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Chapters include: suggestions on fire hose streams, movement of water through hose and nozzles, nozzle and pump pressures, supplying heavy streams, using large capacity fog nozzles, relay problems, and miscellaneous tables.

Nozzle Pressures on the Fire Ground. Another in the Effective Fire Stream Series and a digest of the book mentioned above. This text is intended for teaching beginners the relationships between pump pressures, nozzle pressures and flows, and pressure losses. Pages include large diagrams and brief, easy-to-read text covering nozzles with ⅞-, 1-, 1⅛-, and 1½-inch tips. Simple problems and the answers are included for the various tip sizes.

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Fire Department Operations in Protected Properties. This contains many useful recommendations on procedures which fire departments should follow while handling fires in sprinklered properties. It covers automatic sprinklers, outside sprinklers and standpipes. Each section includes suggestions for inspections, pre-fire planning, using water supply on the fire ground, supplying the sprinkler or standpipe systems, and post-fire operations. The book is a useful guide for improving the coordination of fire companies.

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New Training Facilities in Tacoma

CHIEF Harold Fisk's fire department in Tacoma, Washington, recently dedicated a new training center. For this, the city purchased five acres of land on the Tide Flats in the industrial section of the city. The area is level and accessible by a wide paved road.

The training center includes a 5-story reinforced concrete fire training building, a separate administration building, and a drafting pit. In the future, oil fire fighting facilities will be installed in the southeast corner of the area.

The training building has a "burning room" with six metal doors, two featuring panic hardware. There is also a steel fire escape, a standpipe system which extends to the roof, and openings for a sprinkler system. The drafting pit, used for supplying pumpers, has a capacity exceeding 5,000 gallons and is made of reinforced concrete.

The administration building has controls for sprinklers and telephones to all locations in the training building and in the outside training area. The entire drill tower is lighted by exterior floodlights as well as interior lights. The administration building measures 32 feet wide, 60 feet long; the 5-story drill tower is 20 by 20 feet and the burning building measures 20 by 50 feet. Total cost of land, water mains and buildings was a little over $70,000.

Each company receives an average of 1½ to 2 hours of training at the center once or twice a month, while an average of one hour a day is devoted to classwork and drills at the individual fire stations. Officer schools are conducted each month.

In the future, the fire department plans to erect a fire station, storage building and a maintenance shop on the training site.

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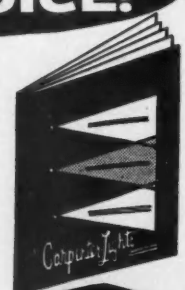

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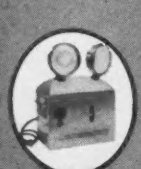

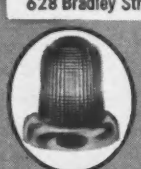

How Many Tri-State Firemen's Associations?

THERE are numerous regional firemen's organizations which are doing a good job of providing good fellowship, cooperation and "firemanic" information in various parts of the country. In a number of cases, fire departments from three states are involved in one of these organizations. We read with interest the program for the 23rd Annual Convention, Tri-State Firemen's Association held August 25–26 at Dolores, Colorado. One of the choice bits of memorabilia we came across was that Dolores was originally "Big Bend" and moved to its present location at the Dolores River in 1893 to make room for a railroad down Lost Canyon. "The fire alarm at that time was three pistol shots, a pause and then three more shots. The pause was most necessary in calling the townspeople to a fire, for six shots in a row was not uncommon and the populace would not have been aroused."

This "Tri-State" group takes in Arizona, Colorado and New Mexico. Evidently it is just a bit quicker on the draw than firemen in southern New England who only held their 19th Tri-State Association meeting on September 24th. This meeting of rural fire department organizations from Connecticut, Massachusetts, and Rhode Island was at Quaddick State Park in Northeastern Connecticut which is just about as remote as you can get in that somewhat overpopulated part of the world.

Then there is another famous three-state firemen's group which somehow failed to call itself "Tri-State." That is the Del-Mar-Va Firemen's Association embracing fire departments in the land of oysters, crab-feasts and fried chicken which constitutes the states of Delaware, Maryland and Virginia lying on the eastern shore of Chesapeake Bay. Here is a peninsula nearly 200 miles long, set apart by nature, cut up by history among three states. Nevertheless, the kindred interests of firemen often transcend political boundaries which are only accidents of history.

Another organization is the Tri-State Fire School sponsored by the Southern West Virginia Firemen's Association, the Fire Marshals Offices of Ohio and West Virginia, and industry.

From a cursory glance at the map of the United States it would appear that well over 100 contiguous

"Tri-State" groups are geographically possible. Perhaps we have missed some which should have been mentioned and will be hearing from the members. The photos below show activities at the 1961 New England Tri-State Firemen's Association field day at Quaddick State Park in Connecticut.

Emergency truck of the Muddy Brook, Connecticut, Volunteer Fire Department utilizing a utility repair truck type of body.

The Sutton, Massachusetts, 10-wheeler with 750 gpm front-mount pump and 1,000-gallon tank can put 5 streams in service. The Sutton department has 6,500 gallons in tankers and has not lost a farm since using the tanker operation.

Streams from the Sutton tankers.

Uxbridge, Massachusetts, front-mount pump with wyes for supplying 8 small lines at forest fires or other rural fires. "Every man can have his own line."

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Preventive Maintenance of Firemen

by Carl W. Irwin, M.D., Surgeon, Association of Fire Chiefs of Maine

PREVENTIVE maintenance has long been an established custom in the fire service. From the days when the rivets in the leather hose were examined and replaced, to the modern day check-list of equipment, we have been aware that small repairs in the shop can prevent a catastrophe at the fire ground. Yet, we consistently overlook preventive maintenance for the most expensive, least expendable, most complicated equipment, the fireman himself. Typically, our program is limited to an investigation of health status on entering the department — hospitalization when the fireman breaks down — and flowers when he dies.

We have taken a few steps to maintain our firemen in working order. We have provided him with protective clothing and helmet, and with respiratory protective devices. Still, there is too much preventable "down time." This could be reduced significantly by a well-planned, consistent program of preventive maintenance. While this must be a year-round program in order to care for fire personnel with acute disease or injury, the essential need is for an annual "overhaul."

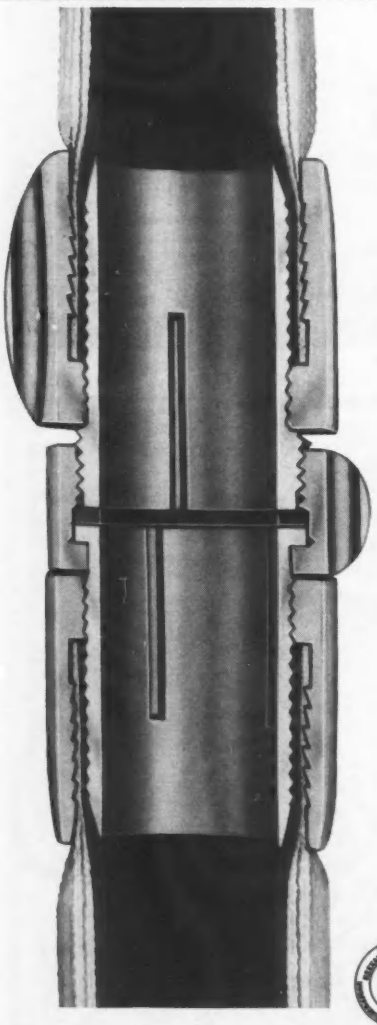
This annual overhaul is designed to detect, while still small, those defects which can be corrected. At the same time, defects may be found which indicate the need for reassignment of this human apparatus to less strenuous duty. A malfunctioning fireman, like a malfunctioning motor, presents a hazard not only to himself, but to the rest of his department. The annual human overhaul is very straightforward and logical; the mechanic in this case should be a competent physician, who is also aware of department standards and activities. Complete examination is important: vision, hearing, skin, chest, and abdomen.

During an annual physical examination, the physician will check pump functions by an electrocardiogram, and will also check pump pressures — the heart and arteries are quite important. The breathing apparatus will be checked by x-rays and examination of the chest. A simple blood test will tell if the fuel mixture is rich enough. The outflow will be checked by studies of the urine, to make certain that the human apparatus does not have diabetes or kidney disease. At the same time, tetanus toxoid immunization will be done. This simple, harmless procedure prevents loss of time related to risk and disability occasionally associated with giving of antitoxin after an injury.

From the medico-legal standpoint, the annual examination provides excellent evidence regarding the date of onset of compensable disabilities. The cost of such a program is not prohibitive in relation to possible benefits. Considering the investment a department has in a trained fireman, the annual cost should be less than one per cent of this investment — a small cost for true preventive maintenance of a valuable bit of equipment.

The program of preventive maintenance cannot be limited to the annual effort, any more than fire prevention activities can be limited to one week of the year. Fire personnel should be encouraged to seek medical attention for any symptoms of illness or injury. This phase of preventive maintenance also pays off in reduced down time by prompt treatment and equally prompt return to duty.

Finally, our plan of preventive maintenance must include education in safety — a continuing program to keep our most valuable fire equipment in top working condition as much of the time as possible.



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Coin-Operated Gasoline Devices

APPARENTLY a strong move is in progress by the manufacturers of coin-operated gasoline dispensing devices to push the sales of their equipment. For prohibiting unattended gasoline dispensing devices, the state fire marshals of Wyoming and Pennsylvania have been taken to court by manufacturers. In Wyoming the court upheld the state fire marshal and in Pennsylvania the case is still pending. In both cases the marshals asked the NFPA Flammable Liquids Specialist for assistance.

Section 6340 of the Flammable Liquids Code, NFPA No. 30, states: *"The installation and use of unattended coin-operated dispensing devices for Class I flammable liquids is prohibited."*

One manufacturer of coin-operated devices disagrees with this prohibition and states that there is no hazard to this operation. He further states that he is already operating such devices in several states and would go to court on any attempt to enforce the prohibition.

The NFPA Committee on Flammable Liquids believes that for the protection of the public the dispensing of gasoline should be under the control of a service station attendant. The reasons for such a belief include the following: The dispensing of gasoline may be a fire hazard; a control should be maintained on the type of gasoline containers filled at service stations for use at other locations; in case of fire an attendant should be present to shut off the gasoline pump, call the fire department, and possibly extinguish small fires or warn the customer; gasoline spills are also potential fires; and the average customer could not be expected to know of the hazards of gasoline or how to handle situations involving gasoline fires or spills.

Booklet for Heart Victims

THE fire department of West Milwaukee, Wisconsin, commanded by Chief John Pavlik, has prepared a special booklet for citizens of that community. The eight-page pamphlet deals only with incidents of heart attack — what the individual should do and what can be expected of the Rescue Squad.

The booklet is another step in the fire department's outstanding public relations program and should impress upon citizens the precautions they can take for their own safety.

Subcommittee on Protective Equipment for Fire Fighters

WILLIAM E. CLARK, Supervisor of the Wisconsin State Fire Service Training Program for the State Board of Vocational and Adult Education, has been appointed chairman of the NFPA Sectional Committee on Protective Equipment for Fire Fighters. This committee, concerned with respiratory protective and resuscitation equipment as well as fire fighters' clothing and helmets, reports through the Committee on Fire Department Equipment. Chief Clark attained the rank of battalion chief of the New York City Fire Department serving as commanding officer of the department's Welfare Island Training School. He was also an instructor at Queens College in New York City. He retired in 1957 after 20 years of service and was chief of fire protection at Bakelite Corp. at Bound Brook, N. J., prior to moving to Wisconsin in 1958 to organize the state fire training program.

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New Items in Los Angeles County

THE Los Angeles County Fire Department, commanded by Chief Keith E. Klinger, reports some interesting new developments. It has dedicated a new fire station at General William Fox Airfield in Lancaster, opened another station in the Soledad Canyon area, and has recently placed in service a new mobile field communication headquarters.

Personnel of the Fire Prevention Bureau and other administrative officers manning the Los Angeles County Fire Department's new communications trailer.

The airfield station, No. 109, was built for $76,999. The 4,800 square foot frame and stucco building can house four pieces of apparatus and includes a 12-bed dormitory and a battalion chief's quarters.

Stationed here is an aircraft crash and rescue truck purchased for just under $68,000 and designed to County Fire Department specifications after nearly two years of research. It is an FWD triple combination pumper with a 2,500 gallon booster tank. It has six-wheel drive and is capable of negotiating a 35 per cent grade. Equipment includes a hydraulically operated turret nozzle, ground sweeps in front and under the chassis, protective clothing, rescue tools and two radios, one on fire department frequency and the other on the airfield frequency.

Station No. 107 is approximately 37 miles northeast of the City of Los Angeles. Built for $60,580, this frame and stucco structure has 3,200 square feet of floor space and houses two engines and two patrol units. It features an office, workroom, storeroom, 8-bed dormitory and covered porch which can be converted into an additional living area. At present, this station houses a new 1,000 gpm Crown pumper and a ¾-ton patrol unit. Also featured at this site is a paved "helispot" designed for the landing and maintenance of helicopters used in brush and forest fire fighting in the canyon area.

The new field communication headquarters is a trailer coach 24 feet long and 10 feet wide. It was designed

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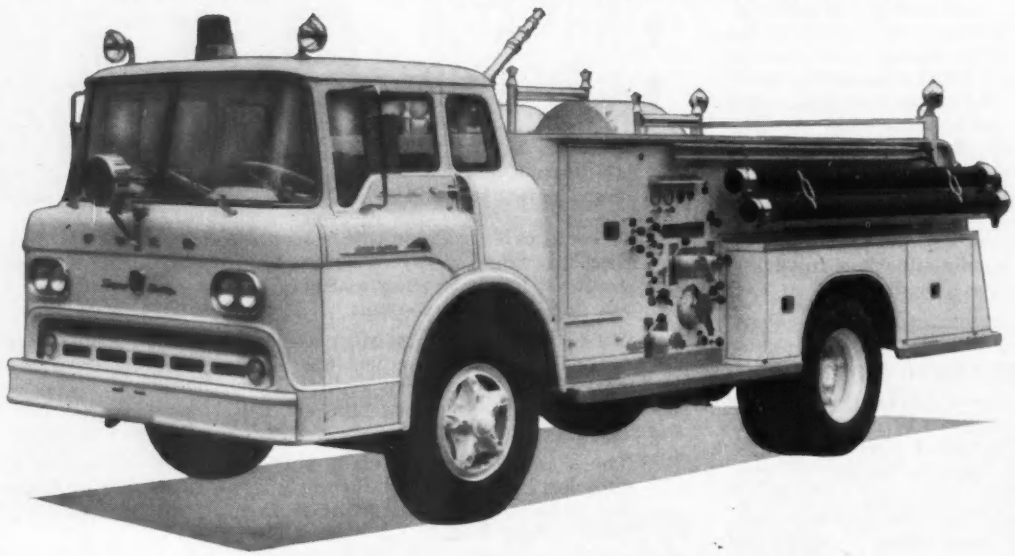

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by the department after several years of research and will be used on all major disasters and fires involving a large amount of men and equipment. At present it is housed in Pacoima and will be towed by an emergency vehicle to the operational scene.

The trailer is equipped with radio, telephone and public address control equipment, has compact office space for fire department officials and staff, and features insulation, space heating and air conditioning as well as a maximum amount of window space.

Chief Klinger stated that it was built for approximately $5,000 with an additional $3,000 worth of electronic equipment installed by the Los Angeles County Department of Communications. Space has been provided for a closed circuit fire department television system to be installed at a future date. The new unit replaces a similar trailer which has been in service for 23 years.

Special Hazard Study

THE first of a new series of publications prepared by the NFPA Fire Record Department is titled *Welding and Cutting in Garages* (NFPA No. HS-1). This 12-page report covers a study of 890 fires which occurred in repair garages and sales-and-service garages. The report is similar in format to the popular *Occupancy Fire Record* series. Single copies of the 8½- by 11-inch pamphlet are available for 50 cents each, with generous discounts granted for quantity orders sent to one address. Write to the NFPA Publications Department.

"This meeting, fifth one, I believe, is for discussion of better and more modern fire-fighting equipment—after inhaling smoke all afternoon I'm too tired to talk."

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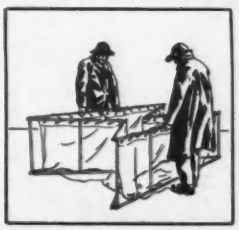
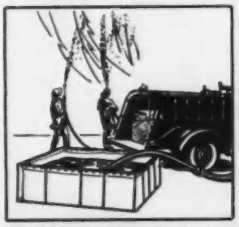
WATER — where you need it, when you need it . . . that's the slogan of Fol-Da-Tank! One Fol-Da-Tank plus your present tanker actually gives you the same fire fighting potential as two tankers. This is important in rural areas where water supply is often miles from the scene of the fire and Fol-Da-Tank often spells the difference between success or failure in fighting fires. Acclaimed by Fire Departments everywhere as the answer to adequate water supply. No parts to assemble, simply unfold and Fol-Da-Tank is ready for instant use. Also ideal for stand-by protection where hazard of re-ignition remains. Folds into compact package and easily carried on truck.

600, 1000 and 1500 Gallon Sizes. Heavy Duty Construction. Consult your nearest dealer or write.

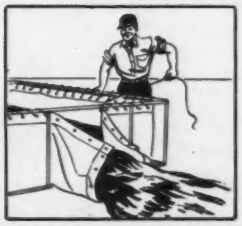
1 Unloaded from fire truck or tanker and set up in less than one minute.



2 Two men easily open. Tanker or Mutual Aid Trucks fill tank.



3 While pumper drafts from Fol-Da-Tank, the tanker may get additional water.



4 Fire out, emptied in seconds and ready to reload. Nothing left behind.

FOL-DA-TANK CO. Box 361, Rock Island, Illinois

Camden Handles LP-Gas Leak in Railroad Tank Car

CHIEF Edward R. MacDowell, of the Camden, New Jersey, Bureau of Fire, reports a recent incident in which his department successfully handled a slow LP-Gas leak in a railroad tank car.

Shortly before 3 A.M. on August 3, a railroad car inspector discovered leaking propane gas coming from the hatch of a tank car in the Pavonia Railroad Freight Yards. The fumes were thought to be rising in the air and dissipating harmlessly. However, as the weather became more oppressive the fumes began spreading outward at ground level.

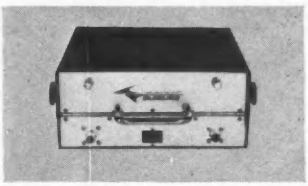
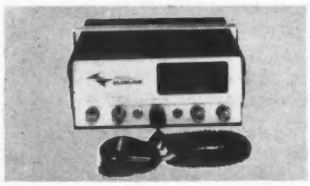
At 3:45 A.M. the police department called the fire department and additional police. One district fire chief responded with one truck and two engine companies. The district chief then called for an additional engine company, a deputy chief and the chief of department.

All companies were spotted outside the freight yard, which is surrounded by residences. Pumpers were connected to hydrants and 2½-inch hose lines were laid as a precautionary measure. One of these lines wyed off to two 1½-inch lines equipped with fog and spray nozzles which were played on the tank car and the tracks.

All railroad traffic through the yard was halted during the emergency, and residents in the surrounding three-block area were told to turn off all gas pilot lights to stoves and hot water heaters.

The tank car, part of a 30-car freight train, was moved approximately 300 feet to a more advantageous position for transferring the petroleum gas to two huge tank trucks. Before railroad employees disconnected the leaking car from the other cars, lubricating oil was poured over couplings to prevent sparks due to coupling movement, while water spray was applied to all wheels at the tracks. A diesel engine used by the railroad was placed about 15 cars away.

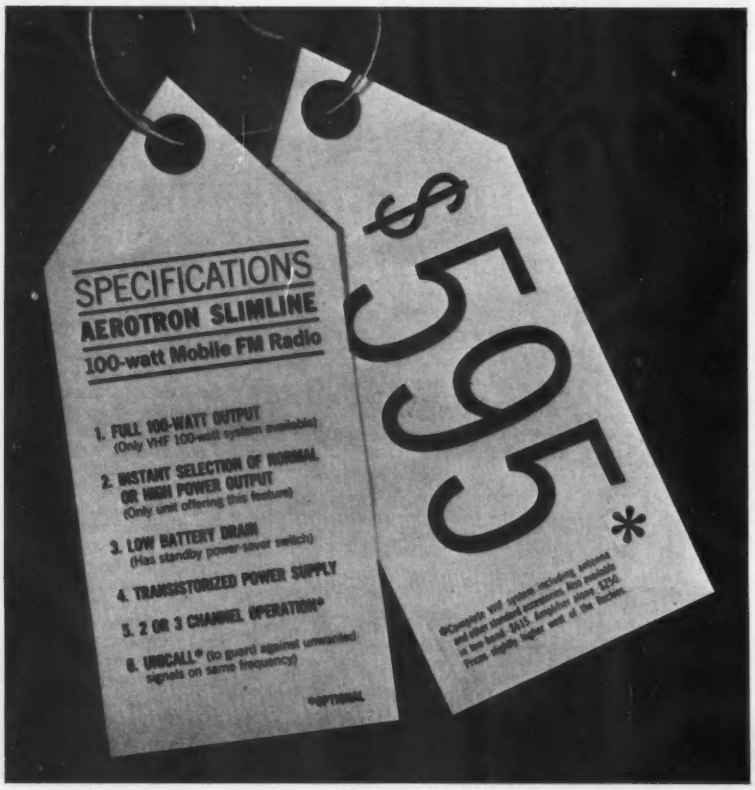
The transfer took approximately three hours.

MORE POWER: For greater range, full saturation coverage. PRICE: Lower than the price of lower-powered equipment. No other system has as much power, more features, or more sensible optionals. NOTE: If you have mobile FM radio in the 10-30-watt category, the 100-watt amplifier alone will boost your power to full 100-watts. For free descriptive literature, write today: Aeronautical Electronics, Inc., P.O. Box 6527, Raleigh, North Carolina.

AEROTRON

A TALE OF TWO TICKETS


SPECIFICATIONS
AEROTRON SLIMLINE
100-watt Mobile FM Radio
1. FULL 100-WATT OUTPUT
(Only VHF 100-watt system available)
2. INSTANT SELECTION OF NORMAL OR HIGH POWER OUTPUT
(Only unit offering this feature)
3. LOW BATTERY DRAIN
(Has standby power-saver switch)
4. TRANSISTORIZED POWER SUPPLY
5. 2 OR 3 CHANNEL OPERATION*
6. UNICALL® (to guard against unwanted signals on same frequency)
*OPTIONAL
$595*

"Operation School Burning No. 2"

THE second book reporting on full-scale fire tests conducted on schools in Los Angeles, California, has just been published. Titled *Operation School Burning No. 2*, it summarizes the results of full-scale fire tests in open stairway, multi-storied school buildings during 1960 and 1961. The tests covered areas of research recommended after the first series of fire tests which were recorded in the book *Operation School Burning*, 1959.

This second volume reports on the function of automatic detection devices, automatic sprinklers, acoustical ceiling materials, plastic light diffusers and plastic windows, smoke and heat actuated door closing devices, and also compares smoke and heat patterns with those of the 1959 tests. The book includes photos, graphs, floor plans and tabulations on 117 full-scale fire tests.

Price of the new volume is $5.75, but a special discount is available, for NFPA members only, until December 1, 1961.

(*Photo by Berkeley Fire Department*)

Circular Fire Station

THE fire department in Berkeley, California, recently relocated Station No. 4 and came up with a new fire station of unusual design. The only available land area for the new station was a triangular plot in Fremontia Park. In designing the station to blend with the park-like atmosphere, the Berkeley architectural firm of Ratcliff & Ratcliff settled on a circular building.

The one-story structure features a series of concrete columns which support a nearly flat roof. Walls between the columns are of glass, as is the skylight point on top of the roof. Three semi-circular wooden additions attached to the main station house the office, lounge, kitchen and dormitory facilities and the heating plant, lockers and storage rooms. The rooms of these additions have curved walls, and the interior design used these curves to best advantage.

The new station houses a new 1,250 gpm American LaFrance pumper as well as the chief's car. (*Information by Howard E. Jackson.*)

Hubert Walker Becomes Asst. Vice President

NFPA member Hubert "Hugh" Walker has been appointed Assistant Vice President, Fire Department Apparatus and Supplies, for American LaFrance, a Division of Sterling Precision Corp. Prior to this he was Manager of Sales Engineering FDA. For a number of years he has served as a member of the NFPA Committee on Fire Department Equipment and as a liaison representative of the Sectional Committee on Aircraft Rescue and Fire Fighting.

In his new position, Walker will concentrate on sales contact with the many fire departments using or planning to use American LaFrance fire apparatus and equipment. He will headquarter at the company's main office in Elmira, New York.

HOME

HOME . . .
Symbol of community strength.
HOWE . . .
Silent Sentinel in more than 10,000 communities . . . offering confident, dependable and economical fire protection for more than four generations.

Your HOME . . . best protected with HOWE equipment.

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HOWE

"dependable fire apparatus since 1872"
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LEATHER
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and
OTHER STYLES

THE FIREMAN'S STANDARD OF SAFETY

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CAIRNS & BRO., Inc. — Allwood, Clifton, N. J.

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New Model Falcon®

- Simple visual inspection with new sight glass—added neatness of design.

No one can place a price on the possible loss of lives due to fire. But Falcon Automatic Fire Alarms & Systems can give early warning of fire to protect lives and guard property.

Falcon Automatic Fire Alarms and Systems are:

- LISTED BY UL AND ULC for use with 600 ft. of ¼" aluminum tubing
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What Can You Learn in Kindergarten?

NEVER underestimate the power of education.

Fire Prevention Chairman Vincent Courtois of the Festus, Missouri, Fire Department could hardly have known last October when he visited the kindergarten that one of the youngsters was going to need to know how to put out a fire two months later.

But here is what happened. On December 20, 1960, Mrs. Jennings had a roast in the oven while she was busy in the basement. Her husband, Reverend Jennings, was in the bathtub. Kevin, 5, heard the buzzer go off indicating that the roast was done and, wanting to help his mother, climbed on a chair and reached over the stove to turn off the unit. His flannel pajamas caught fire in the process. Terrified, he ran from the room.

Kevin's brother, Timothy, 6, remembered what he had learned in kindergarten. He hit his brother, knocking him down, grabbed a large towel, wrapped him in it and then rolled him over and over until the flames were out.

Kevin spent many months in the hospital, but now is in fine health.

Timothy received a life-saving badge from Festus Fire Chief Herb Besand during a recent meeting of the Ozark Firefighters Association.

The Festus Fire Department is using the Sparky symbol in its child-education program.

This Month's Cover

Every fire officer must learn the indications of impending building collapse. Throughout each fire he has to be alert to the warning cracks, falling bricks, rolling floors and other signs that spell danger. When these occur, it is time to withdraw hose crews to fight fire from a safer, probably more effective position.

This month's cover gives a good example. On October 1, in Philadelphia, fire involved an almost vacant, six-story brick warehouse. Only the second and third floors were in use for the storage of baled paper and cotton wastes. When first alarm companies responded, the fifth and sixth floors were fully involved in flames, and bricks were beginning to rain down on the streets. Fire fighters, forbidden to enter the building, used hand lines and heavy streams from the streets. Altogether 150 firemen in 28 companies responded to seven alarms, but falling walls kept them at a distance, and destroyed three row houses, two garages, a truck and an automobile. Only five firemen suffered minor injuries or burns. (*Wide World Photo.*)

FIRE SERVICE MEETINGS

NOVEMBER

Missouri:

NOVEMBER 17: West Central Missouri Firemen's Association, Inc., monthly meeting, Smithville. Contact Reuben Pemberton, secretary, Smithville.

New Jersey:

NOVEMBER 16: Gloucester County Firemen's Association, monthly meeting, Williamstown No. 1. Contact Walter H. Mattson, secretary, 29 Home Avenue, Gibbstown.

New York:

NOVEMBER 20: Chenango County Firemen's Association, Inc., monthly meeting, Brisben. Contact C. J. Gardner, Jr., secretary, Mount Upton.

NOVEMBER 28: Orange County Volunteer Firemen's Association, regular meeting, Central Fire House, Middletown Fire Department. Contact Kenneth V. Fowler, secretary, Harriman.

North Carolina:

NOVEMBER 21: Roanoke Firemen's Association, regular meeting, Roanoke Rapids Fire Department. Contact G. R. Ivey, secretary, Enfield.

Ohio:

NOVEMBER 30: Stark County Firemen's Association, Inc., monthly meeting, Hartville. Contact Gene Kay, secretary, 2036 29th Street, N.E., Canton 5.

Oregon:

NOVEMBER 17: Polk-Yamhill Firemen's Association, monthly meeting, Carlton. Contact Glenn Wick, secretary, 209 Hayter Street, Dallas.

NOVEMBER 20: Clackamas County Firemen's Association, monthly meeting. For location, contact Walter Wickline, secretary, 2137 S.E. Fifth Avenue, West Linn.

Pennsylvania:

NOVEMBER 18: Keystone State Fire Chiefs' Association, annual meeting, Concordville Fire Company, Concordville. Contact Lewis M. Atkinson, 125 Prospect Avenue, Malvern.

Rhode Island:

NOVEMBER 29: Pawtuxet Valley Firemen's League, monthly meeting, Anthony Fire Department. Contact Everett F. Fiske, secretary, 34 Pleasant Street, West Warwick.

DECEMBER

California:

DECEMBER 13: Southern California Conference of Fire Prevention Inspectors, regular meeting, Redondo. Contact Ira A. Anderson, secretary, Rialto.

DECEMBER 15: Marin County Association of Fire Departments, regular meeting, Woodacre. Contact W. H. Lane, secretary, 74 Vendola Drive, San Rafael.

Delaware:

DECEMBER 13: Kent County Volunteer Firemen's Association, regular meeting, Cheswold. Contact Paul B. Smith, Marydel.

DECEMBER 14: New Castle County Volunteer Firemen's Association, regular meeting, Elsmere Fire Co. Contact Edward Hawthorne, secretary, Box 175, St. Georges.

New York:

DECEMBER 1: Broome County Firemen's Association, Inc., monthly meeting, Port Dickinson. Contact Glenn Fuller, secretary, Box 79, Port Crane.

DECEMBER 12: Sullivan County Volunteer Firemen's Association, regular meeting, Summitville Fire Department. Contact William F. Harris, secretary, Pond Eddy.

DECEMBER 13: Tompkins County Firemen's Association, joint meeting with Cortland County (all firemen welcome), Dryden Fire Hall. Contact R. J. Albertson, secretary, Brooktondale.

DECEMBER 13: Steuben County Firemen's Association, Inc., monthly meeting, Hornby. Contact T. L. Burbidge, R. No. 1, Hornell.

DECEMBER 14: Madison County Volunteer Firemen's Association, Inc., regular meeting, Erieville. Contact Donald Burke, secretary, 51 Fenner Street, Cazenovia.

DECEMBER 14: Tioga County Firemen's Association, Inc., monthly meeting, Campville. Contact R. Franklin Ogden, secretary, Box 411, Newark Valley.

DECEMBER 14: Mid-Hudson-Harlem Valley Fire Chiefs' Association, Inc., regular meeting, New Hackensack Fire Co., New Hackensack. Contact Dick Kennedy, secretary, Box 18, Glenham.

Ohio:

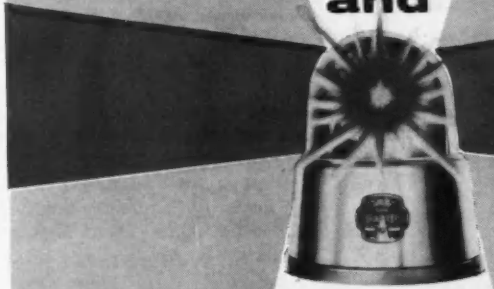
DECEMBER 6: Greene County Firefighters' Association, regular meeting, Sheriff Bradley. Contact N. K. Fernandez, secretary, 64 West Franklin Street, Bellbrook.

DECEMBER 7: Tri-County Volunteer Firemen's Association, monthly meeting, Sunset Heights. Contact C. W. Luyster, Piedmont.

DECEMBER 12: Summit County Firemen's Association, monthly meeting, Tallmadge. Contact Harry Harris, 998 Kubler St., Akron.

TWENTY YEARS AGO WARNING LIGHTS PROVIDED PROTECTION *AHEAD* OF THE VEHICLE. TEN YEARS AGO THE BEACON RAY INTRODUCED THE RADICAL IDEA OF *FULL PROTECTION* —TO THE SIDES AND REAR AS WELL AS AHEAD.

now FEDERAL *has added*
THE 3rd DIMENSION
UP and



DOWN
protection!

The STRAT-O-RAY throws light "*up and down*" as well as to the "*front, sides and rear*"!

The vehicle moves in a sphere of warning light; brilliant beams of one or more colors that sweep across the eyes of the viewer, whatever his relative position to the vehicle. In dense traffic, STRAT-O-RAY beams go *over and under* as well as *into* surrounding traffic.

The STRAT-O-RAY is a radical innovation in warning lights! Ask for Bulletin #351, TODAY!

UP-DOWN OVER-UNDER RIGHT-LEFT FRONT-REAR

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13617 S. WESTERN AVE., BLUE ISLAND, ILL.

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THE "TOP-TACH"
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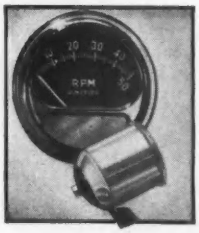
SPECIFY...

Sun
ELECTRIC TACHOMETERS

There's *No Doubt* about it . . . when it comes to Dependable . . . Rugged . . . Accurate tachometer performance . . . SUN Electric Tachometers give you the steady R.P.M. readings you need to assure fire killing water pressures, protected pump and engine life and efficiency.



NEW MODEL FZ 99% ACCURATE
One-piece electronic Zener tachometer—up to 5000 R.P.M. Transmitting unit has no moving parts or variable resistors.

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Address_____
City_____ State_____
182

Firemen's Training In the Months Ahead

Arkansas: Two-week regional training schools will be conducted through November 30. For details write W. A. Turner, Education Building, State Capitol, Little Rock.

Florida: The University of Miami Fire Investigation and Subrogation Seminar will be held November 27–December 1 at the Carillon Hotel, Miami Beach. For details write Dr. Dan Steinhoff, Dean, Adult Education, University of Miami, Coral Gables.

New Jersey: An officers' training course will be conducted November 17–19 at Seaside Heights. For details, write the New Jersey State Safety Council, 24 Branford Place, Newark 2.

South Carolina: Itinerant training classes will be held each week through December. For details write H. B. Wells, Instructor, Shady Springs, Rt. 1, Prosperity.

Virginia: A Peacetime Radiation Fire Instructors School (for approved fire instructors only) will be held November 27–December 1 at Richmond. For details write R. Lawrence Oliver, State Department Education, Trade & Industrial Service, P.O. Box 654, Harrisonburg.

A fly and a flea in a flue
Were imprisoned, so what could they do?
"Let us flee!" said the fly,
"Let us fly!" said the flea,
So they flew through a flaw in the flue.
from SIXTY-SIX NINETY-NINE

FD RESCUE MARKERS
WILL HELP YOUR DEPT. TO "I"DENTIFY THE HOMES OF THE AGED, BLIND, BEDRIDDEN AND HANDICAPPED
WRITE FOR FREE SAMPLE KIT

FIRE DEPARTMENT
4½" Diam.

FIREMEN —
Identify your car as an EMERGENCY VEHICLE with an
FD STICK-ON AUTO EMBLEM
Fluorescent red, can be seen from a distance.
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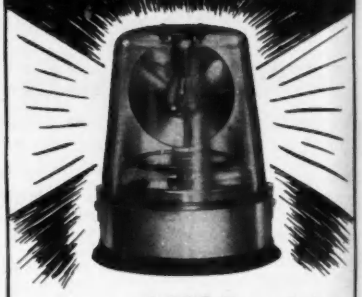
Magnetic—Sticks Like Glue



New **360° Revolving WARNING LIGHT**
SELLING LIKE HOT CAKES!
No one can believe the price!
What a light! Plugs into cigarette lighter. Holds like grim death. Six magnets. Silent motor. Revolving reflector. 60 powerful flashes a minute. Red, blue, or amber dome. Ideal for wreckers, service cars, ambulances, volunteer fire and police at a price they can afford. 7" tall, 5" dia.
New SIRENS available
WRITE US TODAY!
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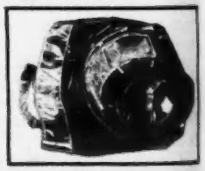
133 N. Jefferson St., Chicago 6, Ill.

NOW...*Fyrepel offers*
you complete heat protection with the *all new*

9148 OVERHOOD
- Aluminized Glass Cloth
- 180° arc of vision
- Fits secure and snug



The 9148 snaps quickly and easily on to the brim of any fire helmet—gives excellent radiant heat protection to face, neck, chest and shoulders. Breathing apparatus can be worn beneath hood. The face piece, frame and drape are all detachable for easy part replacement.

Write for details on Fyrepel's complete line of fire fighting clothing and equipment.

FYREPEL PRODUCTS INC.
NEWARK, O.

You're looking at a revolution in fittings for the fire service!

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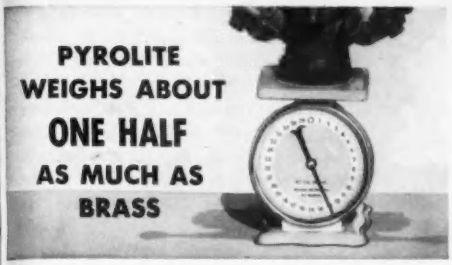

about 1/2 the weight . . . but much, much stronger than brass!

Pyrolite®, the rocket age metal, is actually that much better than brass. 1/2 the weight, but much stronger than cast brass, a surface that's file-hard, it never corrodes, and it stands far more beating and knocks than brass. The ideal material for fire equipment.

TORK-LOK®

Set it and forget it. No locks. Choke your flow, your handle stays put. Water pressure will not open or close it. TORK-LOK® is standard on all PYROLITE® fittings and will be available on 1-1/2", 2", 2-1/2" and 3" discharge, suction and in-line brass valves.

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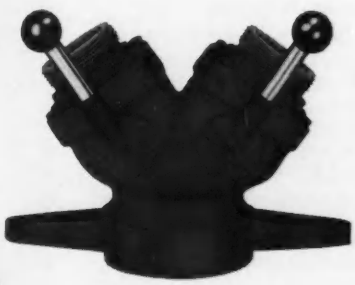
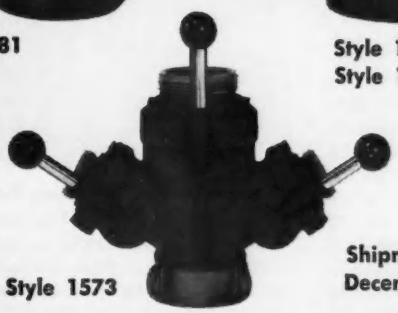


Style 1582
Style 1582A



Style 1573

Shipment starting December 1, 1961

UNI-FLOW® FEATURES

The engineering improvements that have made UNI-FLOW® the biggest selling fire equipment valves in the world.

1. **Fixed Trunnion Mount**
2. **Adjustable Seat**
3. **Holds vacuum or pressure in either direction**
4. **Works easily at 500 lbs. pressure, holds 1000 lbs. pressure**

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FIRE FIGHTING EQUIPMENT

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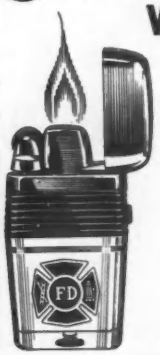

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this month's *News and New Products*

New Kidde "ABC" Portables

Walter Kidde & Company, Inc., announces new 10- and 20-pound triclass "ABC" portable extinguishers, UL and FM "approved" for Class A, B or C fires.

New Circle-D Portable Light

Here is the new Circle-D 12-volt, 300 watt portable light for apparatus, rescue trucks, patrol cars and industry. Operates direct from low voltage car battery and eliminates shock hazard when used in wet locations. Write for bulletin No. 1017 to Natale Machine and Tool Company, Carlstadt 3, New Jersey.

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An informative 12-page, two-color bulletin on Akbar steel rolling fire doors and shutters is offered by *Kinnear Manufacturing Company*, Columbus 10, Ohio. Ask for bulletin No. 112. . . . *Goodall Rubber Company*, Trenton 4, New Jersey, is now featuring the "Goodtite" fire hose mender for on-the-spot repairs. Write for illustrated sheet. . . . A new portable pneumatic Rescue Kit, complete with tools and carrying case is now marketed by *Boston Clip and Tag Company*, Fire Division, 48 Grove Street, Somerville 44, Massachusetts. . . . Graphic dispatching of alarms to substations, by voice and written and diagrammed messages, is now possible with "Electrowriter," described in a free bulletin from *Electrowriter Sales Division, Comptometer Corporation*, 5600 Jarvis Avenue, Chicago 48, Illinois. . . . Featured at the Las Vegas I.A.F.C. Conference were Camcone nozzles, hose, brass goods and sirens. For illustrated, condensed catalog write to *Camcone Products, Inc.*, 55 De Luca Place, San Rafael, California.

Industrial plants and fire departments will find use for the new 16-page catalog on the Wheeler "Fire King" line of protective apparel. Write *Wheeler Protective Apparel*, 224 West Huron Street, Chicago 10, Illinois. . . . Designed to eliminate "blind spots" through rearview mirrors is the All-Vue adjustable two-wing car mirror by *Stadri Products Company*, 147–47 Sixth Avenue, Whitestone 57, Long Island, New York. . . . Free, on request, is a new 12-page illustrated booklet on portable fire extinguishers, smoke and fire detectors and built-in carbon dioxide systems. Ask *Walter Kidde & Company Inc.*, 675 Main Street, Belleville 9, New Jersey, for brochure P-67.

•

Safety for Rear Step Riders

Rose Manufacturing Company, 2700 West Barberry Place, Denver 4, Colorado, announces "Safe-Hi" safety belt for firemen riding apparatus rear steps. Contact manufacturer for full details.

American-Marsh pumps and *American Fire Apparatus Company's* pumpers, tankers and ladder trucks are now sold exclusively in Canada, from coast to coast, by *Wilson & Cousins Company, Ltd.* . . . "Giving Two-Way Radio Its Voice" is the title of a free 16-page booklet on the subject of ignition suppression available from *Champion Spark Plug Company*, Toledo 1, Ohio. . . . Six new ambulances with Cadillac chassis and backed by warranty of twelve months or 12,000 miles are announced by *Miller-Meteor Division* of *Divco-Wayne Corporation*, Piqua, Ohio. . . . *Acme Protection Equipment Company* has announced the appointment of Felix Grabau as new Assistant Sales Manager.

•

Low Cost Reflective Signs

Standard Decal Company, 148 South Valley Road, West Orange, New Jersey, announces a new line of low cost, more brilliant reflective warning signs for interior and exterior uses. Write manufacturer for details.

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Lighter in weight, yet stronger than brass, is the claim for Pyrolite, a new material used by *Akron Brass Manufacturing Company*, Wooster, Ohio, for fire hose couplings. . . . Before buying uniforms, get the facts on *Maier-Lavaty Company* custom-tailored uniforms, 227 West Van Buren Street, Department 110-B, Chicago 7, Illinois. . . . There's growing interest in the hand portable and mobile air units for brush and forestry fire control now marketed by *Controlled Airstreams, Inc.*, 1734 West El Segundo Boulevard, Gardena, California. Write manufacturer for complete details.

Planning a two-way mobile radio system? Be sure to look into the advantages of "Slimline" by *Aeronautical Electronics, Inc.*, Box 6527, Raleigh, North Carolina. . . . For safety, warmth and long life, *Servus Rubber Company*, Rock Island, Illinois, offers high quality in firemen's boots. . . . "Sta-brite," the lifetime metal for hat and coat badges is an exclusive feature for badges by *Nielsen-Rionda, Inc.*, 40 John Street, Department F10, New York 38, New York. . . . Robert L. Borchardt as National Service Manager and Robert Peth as Manager of Engineering are recent appointments by *Motorola Communications and Electronics, Inc.*

John B. Russell joins the new Hartford, Connecticut, sales office of the *Gamewell Company* at 119 Ann Street. . . . "Fighting Tank Fires," the new 25 minute, 16 mm, color and sound training film described in the September issue and just released by NFPA shows many valuable training and operational procedures for fire fighters in all communities. For details, write *NFPA Publications Department.*

BUYING NEW EQUIPMENT?

Consider the products advertised in this issue.

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Photos Tell the Story of Controlled Backfiring

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BACKFIRING WITH CONTROLLED AIRSTREAMS

The Kelsey fire occurred on the night of September 3, 1961, near Placerville, California. During this fire, a 72-inch Fog Tower generated Dry Airstreams for "backfiring." Within 10 minutes the strip shown above was made, approximately 25 by 300 feet on a steep slope.

Note the perfect control with no lateral spread. Leaves and twigs within inches of the burned strip were not singed or burned. Of equal importance is the fact that, while the backfire generated 30 to 40 foot flames as it travelled, there was no "clam shell," no swirling and the controlled airstreams eliminated sparks, embers and flying brands.

Fuel consisted of Chamise brush in light and heavy mass. Note the slight "dog-leg" to the left caused by the prevailing cross winds, yet the width of the burned strip was not affected. Officials who have seen these photos stated that it would not require much thinking on the part of anyone experienced in fighting watershed, forest and grass fires to realize at once the value and urgent need for apparatus capable of accomplishing such a feat in addition to being able to disperse water and/or retardants hundreds of feet through head winds.

The 72-inch fog and air units are available and low priced. ORDER NOW to assure delivery before next fire season in your area. For photos of the 72-inch see October issue of American Forests and September issue (pages 4 and 5) of FIREMEN.

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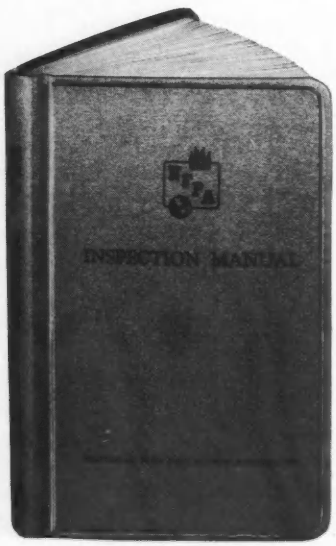

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